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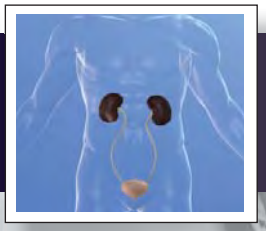

MEDICAL SURVEILLANCE MONTHLY REPORT

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Illness and Injury Diagnoses Within Six Months Before Retirement After 20 or More Years of Active Service, Active Component, U.S. Armed Forces, 2000-2009

Service in the U.S. Armed Forces is voluntary, and most service members serve single terms of enlistment and do not make military service their careers. During the past decade, among individuals who left the military after serving at least one year, the median length of cumulative active service was five years and approximately one-fifth served for at least 20 years, and thus were eligible for length of service retirements.

Military members who serve honorably are entitled to pay and other benefits for physical and mental conditions that were caused or aggravated by their service. As such, there are incentives to ensure that service-connected illnesses and injuries are documented prior to leaving service. On the other hand, there are disincentives to having some medical conditions diagnosed during active service. For example, some conditions are disqualifying for special schools, training, assignments, deployments, or military activities (e.g., flight status). In light of these competing incentives, some conditions may be diagnosed at higher rates just prior to retirement compared to earlier in service; as a result, prevalences and incidence rates of some conditions may be underestimated among military members not near retirement and may be overestimated among those who are preparing for retirement. If so, surveillance estimates of the prevalences, rates, and correlates of risk of some conditions may be incorrect and potentially misleading.

The objectives of this analysis were to identify and characterize the illnesses and injuries that were diagnosed at higher than "expected rates" among active component military members within six months of their retirements. To this end, expected rates were derived from the illness and injury experiences of two cohorts of U.S. military members with at least 20 years of active military service: the experience of non-medically disabled retirees during their active service 12-18 months before their retirements ("pre-retirees"); and the experience of service members who were eligible for length-of-service retirements but continued in active service ("retirement eligibles").

Methods:

The surveillance period was 1 January 2000 to 31 December 2009. The surveillance population included all individuals who served in the active component of the Army, Navy, Air Force, Marine Corps or Coast Guard any time during the surveillance period and completed 20 years of active military service before or during the surveillance period.

For this analysis, a "retiree" was defined as a member of the surveillance population who ended active military service during the surveillance period. For all retirees, all diagnoses indicative of a current illness or injury (ICD-9-CM: 001-999) that were reported during medical encounters (in U.S. military medical facilities and from purchased care providers) within the six months prior to their retirement dates were ascertained from standardized medical records routinely maintained in the Defense Medical Surveillance System (DMSS).

To detect specific illnesses and injuries that were diagnosed at relatively high rates just prior to retirement, the illness and injury experiences of service members within six months of

Table 1. Demographic and military characteristics of service members with at least 20 years of active service,[a] active components, U.S. Armed Forces, January 2000-December 2009

	Retired service members		Retirement-eliglble service members (still active in Jun 2010)	
	No.	%	No.	%
Total individuals	267,273	100.0	69,906	100.0
Age (years)				
<40	48,477	18.1	8,592	12.3
40-44	126,782	47.4	32,871	47.0
45-49	63,517	23.8	21,118	30.2
50-54	23,272	8.7	5,699	8.2
55-59	4,397	1.6	1,393	2.0
60-64	785	0.3	214	0.3
>64	70	0.0	19	0.0
Service				
Army	77,546	29.0	20,167	28.8
Navy	60,502	22.6	17,935	25.2
Air Force	99,068	37.1	23,043	33.0
Marine Corps	21,154	7.9	4,571	6.5
Coast Guard	9,003	3.4	4,190	6.0
Gender				
Male	240,114	89.9	62,966	90.1
Female	27,159	10.2	6,940	9.9
Race/ethnicity				
Black	55,842	20.9	14,672	21.0
White	176,875	66.2	45,576	65.2
Other	34,556	12.9	9,658	13.8
Military occupation				
Combat	48,233	18.0	13,382	19.1
Health care	22,469	8.4	7,184	10.3
Admin/supply	79,148	29.6	19,084	27.3
Other	117,423	43.9	30,256	43.3
Timing of last outpatient diagnosis before the followup period[b]				
<12 months before	233,875	87.5	60,427	86.4
>18 months before	30,107	11.3	9,382	13.4
No diagnosis on record	3,291	1.2	97	0.1
Retirement or other adminstrative medical exam during the followup period				
Retirement exam	58,465	21.8	434	0.6
Other admin exam[c]	141,083	52.8	33,634	48.1

[a]Excludes retirees who were deployed or hospitalized during any of the last 180 days of service. Excludes retirement-eligible members who were deployed or hospitalized during any of the last 180 days of the surveillance period.
[b]Outpatient illness or injury diagnosis (ICD-9-CM: 000-999) in any dx position prior to last 6 months of service (retirees) or prior to the last 6 months of the surveillance period (retirement-eligible service members).
[c]Other administrative outpatient medical examination (excludes deployment health assessments).

retirement ("retirees") were compared against the experiences of two referent cohorts during six-month follow-up periods:

Referent cohort:	*Illness/injury rates during:*
Pre-retirees	12-18 months before retirement
Retirement eligibles	0-6 months before the end of the surveillance period

The first referent cohort consisted of the retirees themselves during a follow-up period 12-18 months before they retired ("pre-retirees"). The second referent cohort consisted of active component members with at least 20 years of active service who were still in service through June 2010 ("retirement eligibles"); the follow-up period for the retirement eligible cohort was the last six months of the surveillance period (July-Dec 2009). Service members were excluded from the analysis if they were deployed or hospitalized within six months of retirement, or during the last six months of the surveillance period, for the retirees and retirement eligibles, respectively.

Illnesses and injuries during the follow-up periods of interest for each retiree and retirement eligible were ascertained from all diagnoses (diagnosis positions 1-4) of illnesses and injuries on standardized records of outpatient encounters. For this analysis, "incident diagnoses" of specific illnesses and injuries (defined at the 3-digit level of the ICD-9-CM) were the first medical encounters for each condition for each cohort member during each follow-up period, i.e., if a cohort member had more than one medical encounter for a specific illness or injury during a follow-up period, only the first was considered the incident diagnosis. For each medical condition of interest, cumulative incidence rates were calculated by dividing the number of incident diagnoses of the condition by the number of individuals in the subject cohort. For comparison purposes, all cumulative incidence rates were expressed as the number of incident diagnoses during the follow-up period of interest per 1,000 individuals at risk.

For each illness and injury, cumulative incidence rate differences were calculated by subtracting the observed rates in the "pre-retiree" and "retirement eligible" cohorts from the respective rates in the "retiree" cohort. The illnesses and injuries with the largest rate differences were considered those most likely detected or revealed during retirement-associated medical activities.

Dot plots were used to compare the cumulative incidence rates of all illnesses and injuries in the retiree cohort (y-axis values) against the corresponding rates in the pre-retiree and retirement eligible cohorts (x-axis values). The slopes of regression lines through the resulting "dot plots" were used to estimate the overall relationships of rates of incident diagnoses of specific illnesses and injuries among retirees

Figure 1. Relationships between cumulative incidence rates of all illnesses and injuries (at 3-digit ICD-9-CM), retirees during the last six months of service (y-axis values) versus "pre-retirees" (solid squares) and "retirement eligibles" (open circles) (x-axis values)

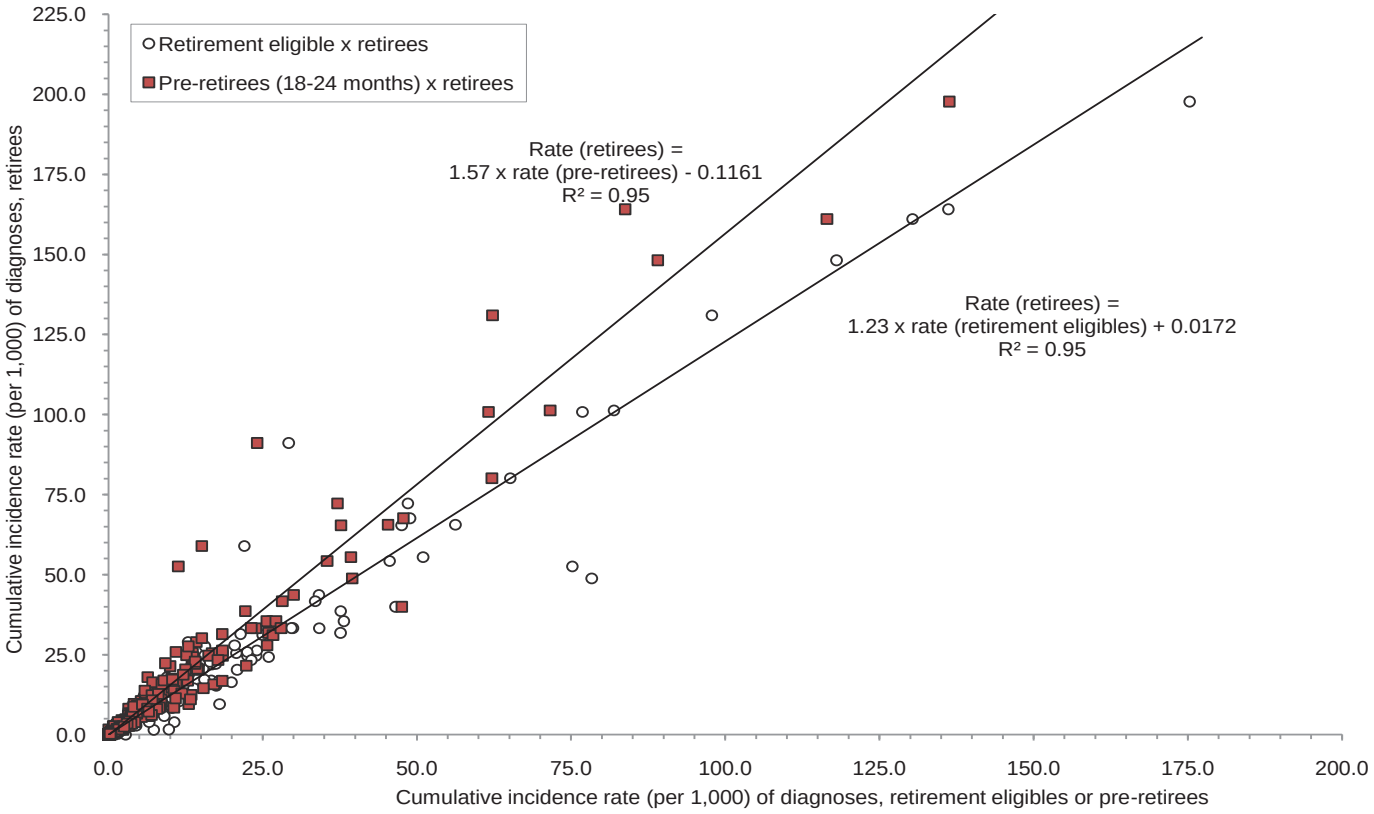
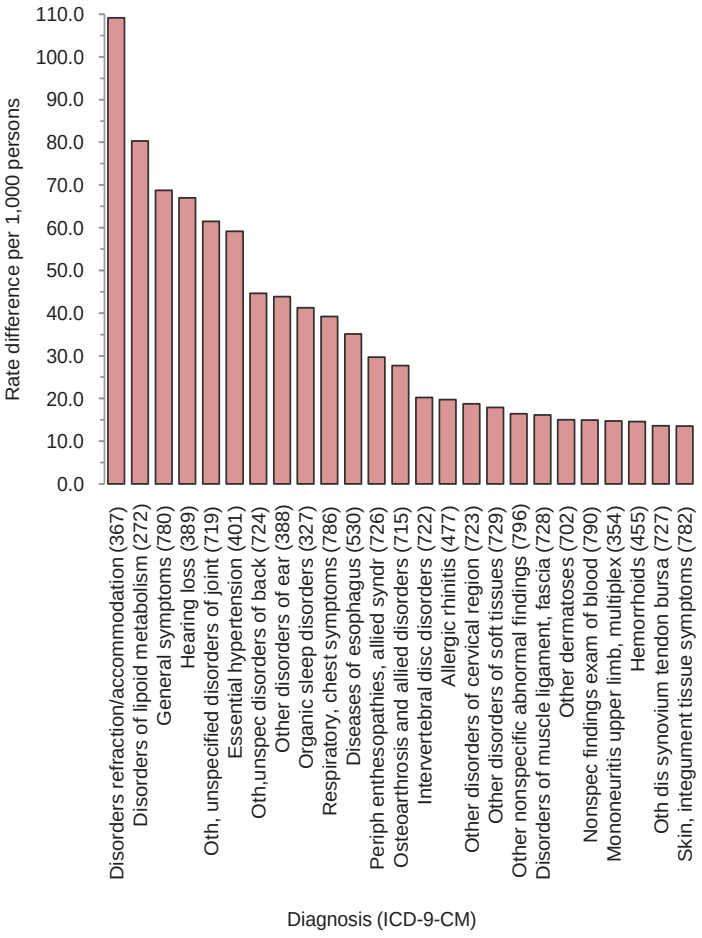
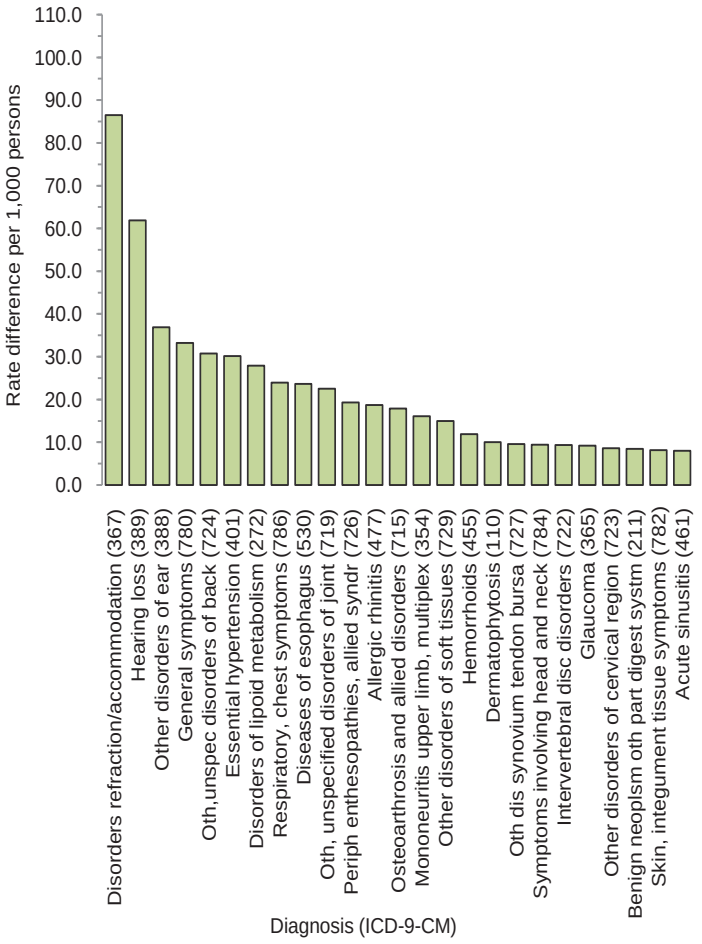


Figure 2. Illness and injury-specific diagnoses (at 3-digit ICD-9-CM) with the largest cumulative incidence rate differences ("excess" incident diagnoses per 1,000 individuals per 6-month follow-up periods) between retirees within six months before retirement and "pre-retirees" and "retirement eligibles" during respective periods of follow-up

2a. Retirees versus "pre-retirees"



2b. Retirees versus "retirement eligibles"



versus pre-retirees and retirement eligibles. To account for the effects of infrequent uses of elective medical services (e.g., poor accessibility, deliberate avoidance), comparisons were made among subgroups of retirees based on the timing of their last outpatient visits prior to their last six months of service.

Results:

Demographic and military characteristics:

During the surveillance period, 287,149 individuals terminated their military service after at least 20 years of active service; for analysis purposes, these individuals were considered "retirees". After excluding retirees who were deployed (n=11,791, 4%) or hospitalized (n=8,301, 3%) during their last six months of active service, 267,273 retirees were included in analyses **(Table 1).**

During the period, 86,848 individuals were eligible for retirement (based on service longevity), but continued in service until at least six months beyond the end of the surveillance period; for analysis purposes, these individuals were considered "retirement eligibles". After excluding retirement eligibles who were deployed (n=15,308, 18%) or hospitalized (n=1,792, 2%) during the last six months of the surveillance period, 69,906 retirement eligibles were included in analyses **(Table 1).**

Relatively more retirees (18.1%) than retirement eligibles (12.3%) were younger than 40 years **(Table 1)**; however, the median ages of both groups were the same (43 years). Relative to their retirement-eligible counterparts, retirees were more likely to be in the Air Force and in administrative or supply-related occupations. Retirees and retirement eligibles were similar in regard to gender, race/ethnicity, and the timing of their last outpatient encounters prior to their respective six-month follow-up periods. Nearly three-quarters of retirees had an outpatient record indicating a retirement medical examination (21.9%) or another administrative medical examination (52.8%) during their last six months of their active service; in contrast, less than one-half of the retirement eligibles had a retirement examination (0.6%) or

other administrative medical examination (48.1%) during the last six months of the surveillance period **(Table 1).**

Observed rates of incident outpatient encounters for illnesses/injuries:

Rates of incident diagnoses of illnesses and injuries were generally higher among retirees in their last six months of active service compared to retirement eligibles and "pre-retirees" (18-24 months before retirement). Specifically, incidence rates of illness and injury-related diagnoses were approximately 57 percent higher within 6 months compared to 12-18 months before longevity retirements; and rates of diagnoses were approximately 23 percent higher among retirees in their last six months of service compared to retirement eligibles still in service **(Figure 1).**

Among retirees, during their last 6 months compared to 18-24 months before they left service, incidence rates were higher for approximately two-thirds (n=582, 64.3%) of the 905 illness and injury-specific diagnoses considered in this report; and compared to retirement-eligibles, retirees in their last six months of service had higher incidence rates for nearly three-fourths (n=661, 73.0%) of all illness and injury-specific diagnoses.

Among retirees within 6 months compared to 18-24 months before they left service, the largest differences in rates of specific illness and injury diagnoses were for "disorders of refraction/accommodation" (rate difference [RD]: 109.1 per 1000 individuals), "disorders of lipoid metabolism" (RD: 80.3 per 1000), "general symptoms" (RD: 68.7 per 1000), "hearing loss" (RD: 67.0 per 1000), and "other and unspecified disorders of joint" (RD: 61.5 per 1000) **(Figure 2a).** Nearly the same illnesses and injuries were "most excessive" (largest rate differences) among retirees in their last six months of service compared to their retirement-eligible counterparts: "disorders of refraction/accommodation" (RD: 86.5 per 1000 individuals), "hearing loss (RD: 61.9 per 1000), "other disorders of ear" (RD: 36.9 per 1000), "general symptoms" (RD: 33.2 per 1000) and "other and unspecified disorders of back" (RD: 30.7 per 1000) **(Figure 2b).** Of note, of the 25 diagnoses that were most excessive among retirees compared to each referent cohort, 20 were the same **(Figures 2a, 2b).**

Rates of illnesses/injuries by timing of last outpatient visit prior to "pre-retirement" follow-up

To assess the potential effects of differences in health care usage in general, retirees were divided into three groups based on the timing of their last outpatient visits prior to their last six months of service. In general, retirees with a medical encounter within one year prior to the end of service follow-up period had incidence rates of illness and injury-related diagnoses approximately two times higher than those whose last encounters were more than one year prior to the follow-up period and more than 3.5 times higher than those with no illness or injury-related medical encounters documented in available ambulatory visit records **(Figure 3).**

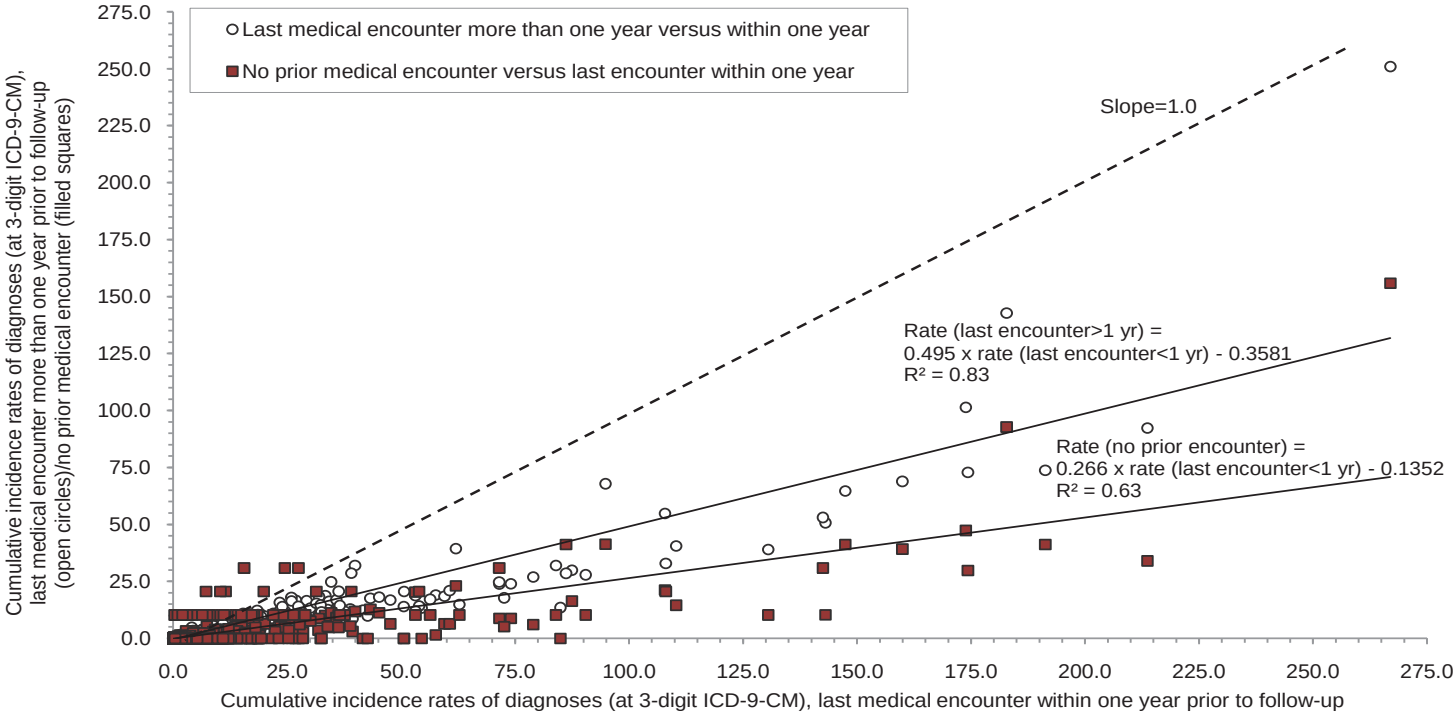
Editorial comment:

Among U.S military retirees, most illnesses and injuries are more frequently diagnosed during their last few months of service compared to earlier in service. Specifically, among recent retirees with 20 years of active service, rates of illness and injury-specific diagnoses were approximately 57 percent higher within 6 months compared to 18-24 months before their retirements and approximately 23 percent higher among retirees in their last few months of service compared to their retirement-eligible counterparts.

The DoD and Veterans Administration have separate systems for compensating service-connected disabilities. By 2002, almost 527,000, or more than 36 percent, of all 1.4 million retirees were receiving VA disability benefits.[1] In general, the conditions that were relatively the most excessively diagnosed near the end of retirees' service are chronic, common among middle-aged Americans, and often compensable as service connected disabilities. These conditions include reduced or distorted visual acuity (reported as "disorders of refraction/accommodation"); hearing loss and tinnitus (included under "other disorders of the ear"); high cholesterol and hyperlipidemia (included under "disorders of lipoid metabolism"); high blood pressure (reported as "essential hypertension"); knee, ankle, and back problems (included under "other, unspecified disorders of" joints and back); and sleep disorders (included under "organic sleep disorders" and "general symptoms").

There are strong and growing incentives for retirees to document potentially compensable disabilities prior to – but not necessarily long before – retirement. These incentives are reflected in the conditions that are most excessively diagnosed among retirees near the end of their service. For example, tinnitus and hearing loss are the most prevalent disabilities of veterans who receive compensation from the VA. In this report, these conditions were among the most excessively diagnosed among soon-to-be retirees compared to themselves earlier in service and retirement eligibles. Of recent note, the number of veterans who receive disability compensations for obstructive sleep apnea has increased more than 60 percent in the past two years. In this report, "organic sleep disorders" (which encompasses "obstructive sleep apnea") was among the most excessively diagnosed conditions at the end of service compared to earlier in service among retirees. Also, in this report, "general symptoms" was one of the three most relatively excessive diagnoses among soon-to-be retirees compared to themselves earlier in service and retirement eligibles; approximately three-quarters (76%) of all "general symptoms" diagnoses among retirees were sleep disturbances (e.g., unspecified sleep apnea, hypersomnia, insomnia).

Figure 3. Relationships between cumulative incidence rates of all illnesses and injuries (at 3-digit ICD-9-CM) among retirees, by the timing of their most recent illness or injury-specific medical encounter prior to the last six months of service



The findings of this report are relevant to ongoing military health surveillance efforts. For example, if career-oriented service members do not seek care for or fear diagnoses of certain conditions, then the prevalences, incidence rates, and trends of such conditions may be systematically underestimated. On the other hand, if retirees seek first-time diagnoses of certain conditions in the last few months of their active service, then estimates of prevalences and incidence rates of such conditions in relation to time in service and age may be misleading. This analysis did not determine the proportions of relatively excessive diagnoses that were first-ever diagnoses among retirees; such an analysis is ongoing and will be the focus of a future *MSMR* report.

There are other limitations of the report that should be considered when interpreting the results. For example, some retirees may have been deployed or hospitalized during the pre-retirement (12-18 months before retirement) follow-up period. Records of their medical encounters during deployment were not available for this analysis; thus, rates of some illnesses and injuries during the pre-retirement period may have been underestimated. On the other hand, 18 percent of all service members with more than 20 years of active service were excluded from the retirement-eligible cohort because they were deployed during part or all of the follow-up period. In general, deployers are healthier than nondeployers; thus, the exclusion of deployers from the retirement-eligible cohort may have increased the rates of some illness and injury-related diagnoses in that cohort. Also, some diagnoses that are closely associated with deployment, e.g., PTSD, may be relatively underrepresented in the retirement-eligible cohort.

This analysis assumed that service members who retired after 20 years or more of active service were medically fit; thus, their retirements were not due to medical disabilities. However, service members with 20 years or more of active service may become or be found medically unfit for duty. Such individuals would be eligible for retirement based on both length of service and medical disability; some of these retirees may have been included in the retiree cohort.

In spite of the limitations, the main findings and implications of this report are clear. Service members within a few months of retirement are more likely than their counterparts to be diagnosed with illnesses and injuries in general – and with chronic conditions that may be compensable as service-connected disabilities in particular. The findings should be considered when designing, conducting, and interpreting results of health surveillance analyses.

References:

1. Congressional Budget Office. CBO testimony: the cost of providing retirement annuities and veterans' disability compensation to certain retirees of the uniformed services --statement of Sarah T. Jennings, Principal Analyst Defense, International Affairs, and Veterans' Affairs Cost Estimates Unit before the Subcommittee on Personnel Committee on Armed Services, United States Senate 2003. http://www.cbo.gov/ftpdocs/41xx/doc4132/03-27-Veterans.pdf. Accessed 20 October 2010.

2. Department of Veterans Affairs. Veterans Benefits Administration. Annual Benefits Report FY2009. http://www.vba.va.gov/REPORTS/abr/2009_abr.pdf. Accessed 6 July 2010.

Cold Weather Injuries, U.S. Armed Forces, July 2005 - June 2010

Prolonged and/or intense exposures to cold can significantly impact the health, well-being and operational effectiveness of service members and their units.[1-4] Because U.S. military operations are conducted in diverse geographic and weather conditions, the U.S. military has developed extensive countermeasures against threats associated with training and operating in cold environments.[1-5]

In recent years, rates of hospitalization for cold weather injuries of U.S. military members have generally declined — at least in part, because of improvements in clothing, equipment, policies, and practices.[2] Still, cold injuries (many of them preventable) affect hundreds of service members each year. This report summarizes frequencies, rates, and correlates of risk of cold injuries among members of active and reserve components of the U.S. Armed Forces during the past five years.

Methods:

The surveillance period was 1 July 2005 to 30 June 2010. The surveillance population included all individuals who served in an active and/or reserve component of the U.S. Armed Forces any time during the surveillance period. For analysis purposes, years were divided into 1 July through 30 June intervals so that complete "cold weather seasons" could be represented in year-to-year summaries.

Inpatient, outpatient, and reportable medical event records in the Defense Medical Surveillance System (DMSS) were searched to identify all primary (first-listed) diagnoses of "frostbite" (ICD-9-CM codes: 991.0-991.3), "immersion foot" (ICD-9-CM: 991.4), "hypothermia"(ICD-9-CM: 991.6), and "other specified/unspecified effects of reduced temperature" (ICD-9-CM: 991.8-991.9). To exclude follow-up encounters for single cold injury episodes, only one cold injury per individual per year was included. In summaries by type of cold injury, one of each type of cold injury per individual per year was included. If multiple medical encounters for cold injuries occurred on the same day, only one was used for analysis (hospitalizations were prioritized over ambulatory visits).

Results:

From July 2009 through June 2010, 556 members of the U.S. Armed Forces had at least one medical encounter with a primary diagnosis of cold injury. During the year, 465 members of the active component were affected by cold injuries; in general, the cold injury rates among active component members (33.0 per 100,000 person years [p-yrs]) have been remarkably stable over the past four years **(data not shown).**

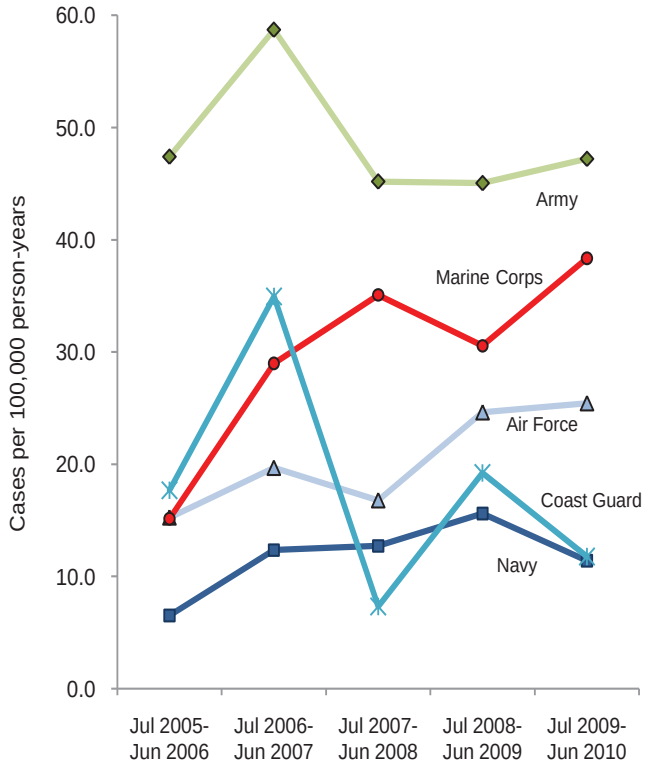
During the past year, nearly one-fourth (n=91) of all cold injuries affected members of the reserve component. Fewer reserve component members were affected by cold injuries in 2009-10 than in the prior two years **(data not shown).**

In the active components of the Services, the rate of any cold injury in the Army (47.2 per 100,000 p-yrs) was approximately 23 percent higher than in the Marine Corps (38.3 per 100,000 p-yrs), 86 percent higher than in the Air Force (25.4 per 100,000 p-yrs), and four times higher than in the Navy (11.4 per 100,000 p-yrs) and Coast Guard (11.8 per 100,000 p-yrs) **(Figure 1).** In the past year, soldiers accounted for more than one-half (56%) of all active component members affected by cold injuries **(Figure 2).**

During the past cold season, the most frequently reported cold injuries among the Services were frostbite in the Army and Air Force, hypothermia in the Marine Corps and Coast Guard, and immersion foot in the Navy **(Table 1a-e).**

In the Army, the rate of cold injuries (any cause) in 2009-10 was slightly higher than in the previous two years; the

Figure 1. Rates of "any cold injury"[a] by service and year, active component, U.S. Armed Forces, July 2005-June 2010



[a]One cold injury per individual per year

relatively high rate reflected increases in immersion foot, hypothermia, and unspecified cold injuries **(Table 1a).**

In the Navy, the rate of cold injuries (any cause) in 2009-10 was lower than in the previous three years; the relatively low rate reflected a sharp decrease in frostbite cases **(Table 1b).**

In the Air Force, the rate of cold injuries (any cause) in 2009-10 was higher than in any other year of the surveillance period; in the past year in the Air Force, there was a notable increase in frostbite and a decline in immersion foot cases **(Table 1c).**

In the Marine Corps, the rate of cold injuries (any cause) in 2009-10 was higher than in any other year of the surveillance period; during the year, there were notable increases in hypothermia and frostbite and a decline in immersion foot cases **(Table 1d).**

In the Coast Guard in 2009-10, there were five cold injury cases of which three were hypothermia **(Table 1e).**

During the past five years, in the Army, Marine Corps and Coast Guard, rates of frostbite and "unspecified" cold injuries — hence, cold injuries overall — were sharply higher among females than males **(Tables 1a,d,e).** In the Air Force and Navy, there were no clear relationships between gender and cold injury risk **(Tables 1b-c).**

In the Army, Air Force, and Marine Corps, rates of frostbite, in particular, and cold injuries overall were sharply higher among black non-Hispanic than other racial-ethnic group members. In the Navy and Coast Guard, there were no clear relationships between race-ethnicity and cold injury risk **(Tables 1a-e).**

In general, rates of cold injuries were higher among the youngest aged (<20 years old) and enlisted members relative to their respective counterparts. However, in the Navy and Air Force, rates of hypothermia were higher among 20-24 year-olds than those younger or older; and in the Marine Corps and Coast Guard, rates of frostbite were more than 4 and 2 times higher, respectively, among officers than enlisted members **(Tables 1a-e).**

During the surveillance period, there were 2,120 incident annual episodes (i.e., considering one of each injury type per person per year) of cold injuries among active service members; of these, 74 (3.5%) affected recruits/basic trainees. Marine Corps recruits accounted for relatively more of the total cold injuries of their service (12.3% of all cold injuries during the period) than did recruits of the other services (Army, 2.5%; Navy, 1.5%; Air Force, 1.5%) **(data not shown).** Also during the period, 38 (1.8%) of the 2,120 incident cold injury episodes required hospitalization. Most (84%) of the hospitalized cases affected Army (n=23) or Marine Corps (n=9) members **(data not shown).**

Table 1a. Cold injuries, active component, U.S. Army, July 2005-June 2010

	Frostbite		Immersion foot		Hypothermia		Unspecified		All cold injuries[b]	
	No.	Rate[a]	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total	649	24.9	167	6.4	126	4.8	393	15.1	1,335	51.3
Sex										
Male	482	21.5	146	6.5	109	4.9	231	10.3	968	43.1
Female	167	46.8	21	5.9	17	4.8	162	45.4	367	102.8
Race/ethnicity										
White, non-Hispanic	282	17.5	120	7.5	80	5.0	153	9.5	635	39.5
Black, non-Hispanic	276	52.4	33	6.3	33	6.3	181	34.4	523	99.4
Other	91	19.5	14	3.0	13	2.8	59	12.6	177	37.9
Age										
<20	67	40.4	19	11.4	26	15.7	55	33.1	167	100.6
20-24	247	29.4	79	9.4	61	7.3	145	17.3	532	63.4
25-29	142	23.2	36	5.9	18	2.9	81	13.2	277	45.2
30-34	80	20.7	17	4.4	10	2.6	52	13.5	159	41.2
35-39	61	18.7	12	3.7	4	1.2	38	11.7	115	35.3
40-44	31	17.1	2	1.1	5	2.8	12	6.6	50	27.5
45+	21	23.1	2	2.2	2	2.2	10	11.0	35	38.6
Rank										
Enlisted	590	27.2	143	6.6	118	5.4	352	16.2	1,203	55.4
Officer	59	13.7	24	5.6	8	1.9	41	9.5	132	30.7
Cold year (Jul-Jun)										
2005-2006	109	22.5	39	8.0	15	3.1	72	14.8	235	48.4
2006-2007	154	30.7	37	7.4	28	5.6	92	18.3	311	61.9
2007-2008	124	23.8	27	5.2	26	5.0	72	13.8	249	47.9
2008-2009	131	24.2	27	5.0	26	4.8	74	13.7	258	47.6
2009-2010	131	23.7	37	6.7	31	5.6	83	15.0	282	51.0

[a]Rate per 100,000 person-years
[b]One of each type of cold injury per individual per year

Figure 2. Cold injuries among members of active and reserve components, U.S. Armed Forces, by service and year, July 2005-June 2010

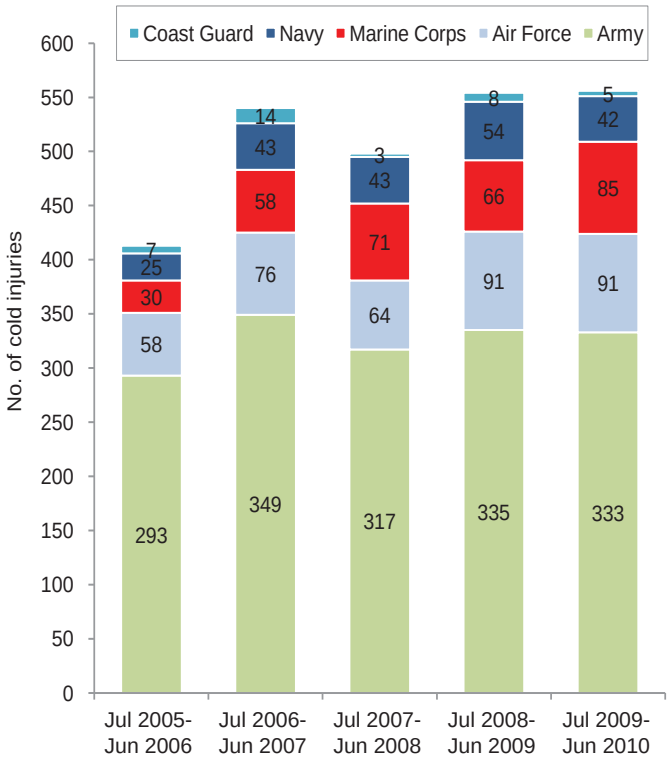


Table 1b. Cold injuries, active component, U.S. Navy, July 2005-June 2010

	Frostbite		Immersion foot		Hypothermia		Unspecified		All cold injuries[b]	
	No.	Rate[a]	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total	76	4.5	47	2.8	45	2.7	31	1.9	199	11.9
Sex										
Male	65	4.6	43	3.0	40	2.8	25	1.8	173	12.1
Female	11	4.4	4	1.6	5	2.0	6	2.4	26	10.5
Race/ethnicity										
White, non-Hispanic	40	4.3	30	3.2	23	2.5	19	2.1	112	12.1
Black, non-Hispanic	13	4.5	3	1.0	10	3.4	5	1.7	31	10.6
Other	23	5.0	14	3.1	12	2.6	7	1.5	56	12.3
Age										
<20	16	15.6	15	14.6	4	3.9	5	4.9	40	39.0
20-24	27	5.0	17	3.1	26	4.8	12	2.2	82	15.1
25-29	16	4.2	7	1.8	8	2.1	6	1.6	37	9.6
30-34	4	1.6	4	1.6	5	2.0	5	2.0	18	7.2
35-39	5	2.3	3	1.4	1	0.5	1	0.5	10	4.6
40-44	4	3.4	1	0.9	0	0.0	1	0.9	6	5.2
45+	4	6.2	0	0.0	1	1.6	1	1.6	6	9.3
Rank										
Enlisted	65	4.6	42	3.0	43	3.0	26	1.8	176	12.4
Officer	11	4.2	5	1.9	2	0.8	5	1.9	23	8.9
Cold year (Jul-Jun)										
2005-2006	4	1.1	5	1.4	8	2.3	7	2.0	24	6.8
2006-2007	15	4.4	7	2.1	17	5.0	4	1.2	43	12.6
2007-2008	21	6.4	9	2.7	3	0.9	9	2.7	42	12.7
2008-2009	25	7.6	14	4.3	8	2.4	5	1.5	52	15.9
2009-2010	11	3.4	12	3.7	9	2.8	6	1.8	38	11.7

[a]Rate per 100,000 person-years
[b]One of each type of cold injury per individual per year

Table 1c. Cold injuries, active component, U.S. Air Force, July 2005-June 2010

	Frostbite		Immersion foot		Hypothermia		Unspecified		All cold injuries[b]	
	No.	Rate[a]	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total	175	10.5	44	2.6	51	3.1	77	4.6	347	20.8
Sex										
Male	145	10.8	38	2.8	45	3.3	54	4.0	282	21.0
Female	30	9.2	6	1.8	6	1.8	23	7.0	65	19.9
Race/ethnicity										
White, non-Hispanic	114	9.6	33	2.8	38	3.2	46	3.9	231	19.5
Black, non-Hispanic	39	16.2	9	3.7	11	4.6	23	9.6	82	34.1
Other	22	8.9	2	0.8	2	0.8	8	3.2	34	13.7
Age										
<20	21	27.0	6	7.7	4	5.1	13	16.7	44	56.5
20-24	83	17.2	18	3.7	29	6.0	32	6.6	162	33.6
25-29	28	7.0	7	1.8	8	2.0	17	4.3	60	15.0
30-34	18	6.9	5	1.9	2	0.8	7	2.7	32	12.3
35-39	14	6.1	5	2.2	4	1.7	1	0.4	24	10.4
40-44	8	5.2	2	1.3	1	0.7	5	3.3	16	10.4
45+	3	4.5	1	1.5	3	4.5	2	3.0	9	13.6
Rank										
Enlisted	149	11.2	42	3.2	48	3.6	69	5.2	308	23.1
Officer	26	7.7	2	0.6	3	0.9	8	2.4	39	11.5
Cold year (Jul-Jun)										
2005-2006	19	5.5	9	2.6	12	3.5	16	4.6	56	16.1
2006-2007	43	12.6	7	2.1	10	2.9	10	2.9	70	20.6
2007-2008	34	10.4	6	1.8	6	1.8	10	3.1	56	17.1
2008-2009	33	10.2	17	5.2	12	3.7	19	5.8	81	24.9
2009-2010	46	13.9	5	1.5	11	3.3	22	6.7	84	25.4

[a]Rate per 100,000 person-years
[b]One of each type of cold injury per individual per year

During the surveillance period, 30 or more cold injuries occurred at each of 20 locations worldwide. Of these locations, 11 had more (and nine had fewer) cold injuries in 2009-10 than the average of cold injury episodes per year during the prior four years at the respective locations. In the past year, only Forts Wainwright and Richardson in Alaska (n=33), Fort Bragg, NC (n=30) and Fort Benning, GA (n=23) had more than 20 cold injury cases each among active component members **(Figure 3).**

Over the past five years, the highest installation region-specific rate affected Forts Wainwright and Richardson in Alaska (400.4 per 100,000 p-yrs). The highest rates in the continental United States were at MCB Quantico in Virginia (149.4 per 100,000 p-yrs) and MCRD San Diego in California (125.0 per 100,000 p-yrs). The highest region-specific rate overseas was documented in Korea (93.5 per 100,000 p-yrs) **(Figure 4).**

Editorial comment:

In general, during the past cold season, numbers, rates, and types of cold injuries among U.S. service members were similar to those in recent years. The finding should be interpreted in light of the unusual severity of the winter of 2009-10 in many parts of the continental United States and Europe.

As in the past, rates of cold injuries overall remain higher in the Army and Marine Corps than in the Air Force, Navy, and Coast Guard. In the Marine Corps, the rate of cold injuries overall was higher during the past cold season than the previous four cold seasons. Compared to the prior season, in 2009-10, rates were similar in the Army and Air Force and declined in the Navy and Coast Guard.

Comparisons of cold injury experiences among the Services should be done carefully if at all. For example, differences across services in cold injury rates — overall, by type, and in relation to the military characteristics of those most affected — reflect differences in the natures, locations, and circumstances of the training and operations of the Services. Also, differences in rates across services may reflect differences in the ascertainment and/or reporting of cold injury cases (e.g., records of medical encounters during field exercises, deployment operations, and aboard Navy ships are not routinely available for health surveillance purposes).

In general, among service members overall, the youngest aged, female, enlisted, and black non-Hispanic service

Table 1d. Cold injuries, active component, U.S. Marine Corps, July 2005-June 2010

	Frostbite		Immersion foot		Hypothermia		Unspecified		All cold injuries[b]	
	No.	Rate[a]	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total	95	10.0	75	7.9	90	9.5	30	3.2	290	30.6
Sex										
Male	83	9.3	73	8.2	81	9.1	27	3.0	264	29.7
Female	12	20.3	2	3.4	9	15.2	3	5.1	26	43.9
Race/ethnicity										
White, non-Hispanic	60	9.3	51	7.9	54	8.4	17	2.6	182	28.4
Black, non-Hispanic	21	21.6	8	8.2	13	13.4	4	4.1	46	47.3
Other	14	6.7	16	7.6	23	11.0	9	4.3	62	29.6
Age										
<20	23	17.9	37	28.8	33	25.6	6	4.7	99	76.9
20-24	39	8.5	31	6.8	42	9.2	18	3.9	130	28.4
25-29	16	9.3	5	2.9	9	5.2	4	2.3	34	19.7
30-34	12	13.7	2	2.3	4	4.6	2	2.3	20	22.8
35-39	4	6.4	0	0.0	0	0.0	0	0.0	4	6.4
40-44	0	0.0	0	0.0	2	7.1	0	0.0	2	7.1
45+	1	8.2	0	0.0	0	0.0	0	0.0	1	8.2
Rank										
Enlisted	64	7.5	73	8.6	84	9.9	22	2.6	243	28.6
Officer	31	31.2	2	2.0	6	6.0	8	8.1	47	47.3
Cold year (Jul-Jun)										
2005-2006	7	3.9	9	5.0	11	6.2	1	0.6	28	15.7
2006-2007	26	14.5	16	8.9	5	2.8	5	2.8	52	29.0
2007-2008	17	9.0	20	10.6	21	11.2	10	5.3	68	36.2
2008-2009	17	8.5	18	9.0	20	10.0	7	3.5	62	31.1
2009-2010	28	13.8	12	5.9	33	16.2	7	3.4	80	39.3

[a]Rate per 100,000 person-years
[b]One of each type of cold injury per individual per year

Table 1e. Cold injuries, active component, U.S. Coast Guard, July 2005-June 2010

	Frostbite		Immersion foot		Hypothermia		Unspecified		All cold injuries[b]	
	No.	Rate[a]	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total	15	7.3	3	1.5	16	7.8	5	2.4	39	19.1
Sex										
Male	10	5.6	3	1.7	15	8.4	4	2.2	32	17.8
Female	5	19.9	0	0.0	1	4.0	1	4.0	7	27.9
Race/ethnicity										
White, non-Hispanic	10	6.8	2	1.4	15	10.1	3	2.0	30	20.3
Black, non-Hispanic	0	0.0	1	8.7	0	0.0	0	0.0	1	8.7
Other	5	11.1	0	0.0	1	2.2	2	4.4	8	17.7
Age										
<20	3	39.5	0	0.0	3	39.5	0	0.0	6	78.9
20-24	4	7.4	3	5.5	5	9.2	0	0.0	12	22.1
25-29	3	5.6	0	0.0	1	1.9	3	5.6	7	13.2
30-34	1	3.0	0	0.0	3	9.1	0	0.0	4	12.1
35-39	1	3.9	0	0.0	2	7.9	0	0.0	3	11.8
40-44	1	5.4	0	0.0	2	10.7	2	10.7	5	26.8
45+	2	15.7	0	0.0	0	0.0	0	0.0	2	15.7
Rank										
Enlisted	10	6.1	3	1.8	14	8.5	3	1.8	30	18.2
Officer	5	12.4	0	0.0	2	5.0	2	5.0	9	22.4
Cold year (Jul-Jun)										
2005-2006	4	10.1	0	0.0	3	7.6	0	0.0	7	17.7
2006-2007	7	17.5	0	0.0	5	12.5	3	7.5	15	37.4
2007-2008	2	4.9	0	0.0	1	2.4	0	0.0	3	7.3
2008-2009	1	2.4	2	4.8	4	9.6	2	4.8	9	21.6
2009-2010	1	2.4	1	2.4	3	7.1	0	0.0	5	11.8

[a]Rate per 100,000 person-years
[b]One of each type of cold injury per individual per year

Figure 3. Annual number of cold injuries, 2009-10 and mean during 2005-9, at locations with at least 30 cold injuries during the surveillance period, active component, U.S. Armed Forces, July 2005-June 2010

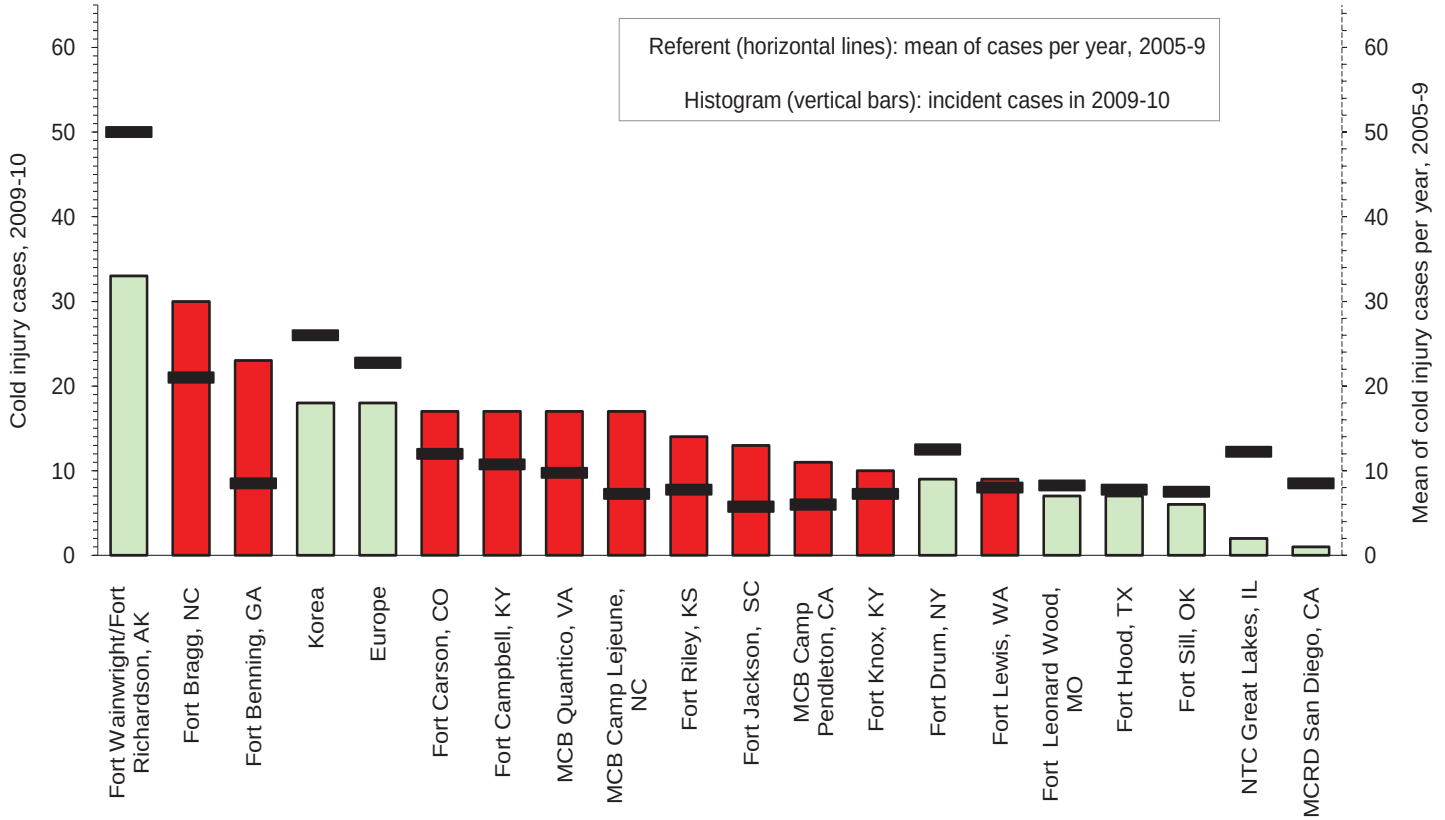
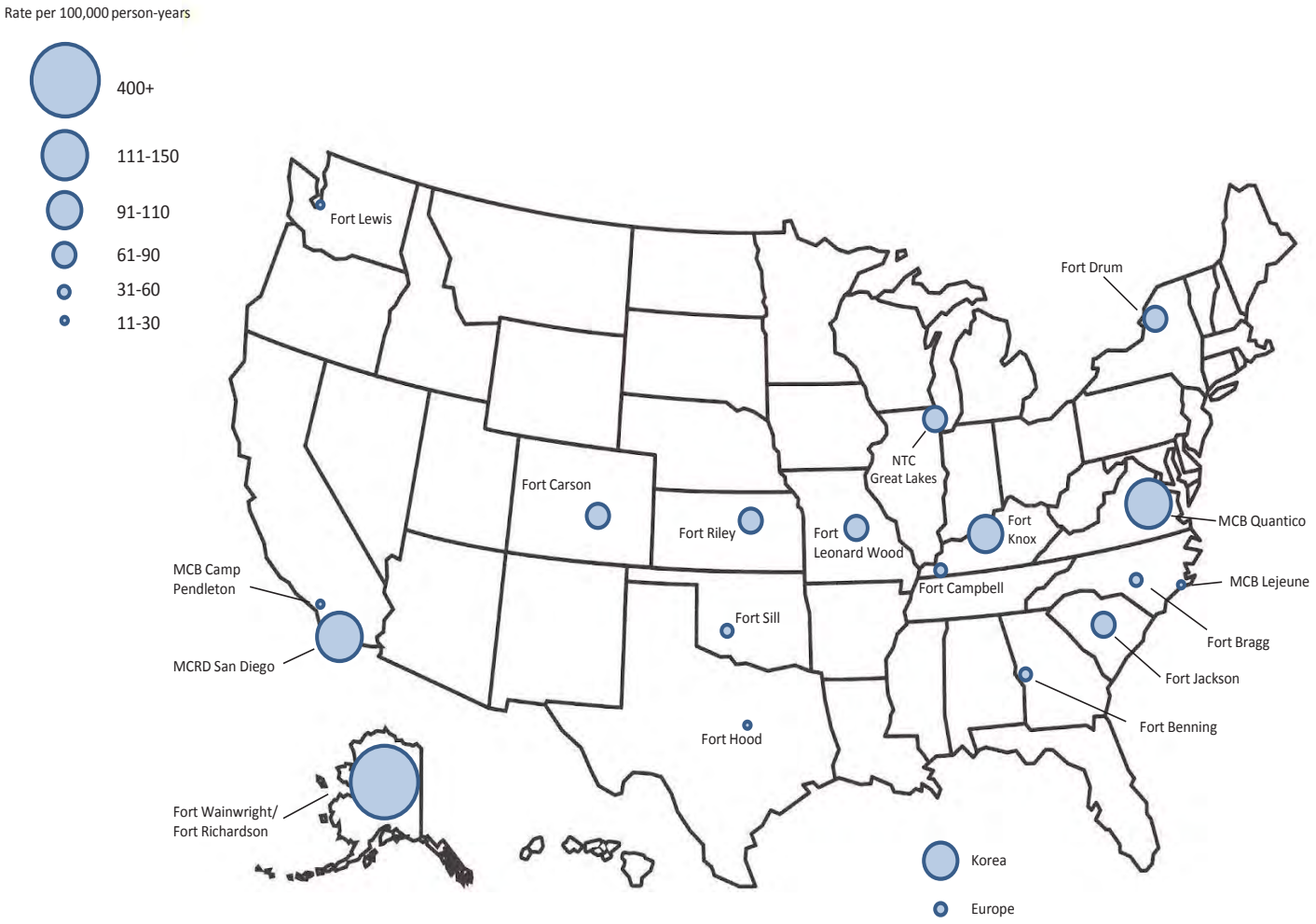


Figure 4. Rates of cold injuries by installation (with at least 30 total cases during the surveillance period), July 2005-June 2010



members have relatively high rates of cold injuries — particularly frostbite. Other reports have documented that African American soldiers and soldiers with prior cold injuries have increased susceptibilities to cold injuries during prolonged or intense cold exposures.[2,3] Special vigilance by individuals, line supervisors, commanders, and medical staff is indicated to prevent cold injuries among those with known or suspected increased susceptibilities.

Commanders and supervisors at all levels should implement appropriate countermeasures to prevent cold injuries, including proper clothing and equipment, wind chill temperature monitoring and awareness training.[1,4] Service members who train in wet and freezing conditions should know the signs of cold injury, obtain adequate hydration, and avoid tobacco, caffeine, and vasoconstrictive medications.[1,4,5] Up-to-date cold injury prevention materials (including posters, presentation outlines, policies, regulations, and technical bulletins) are available online: http://phc.amedd.army.mil/topics/discond/cip/Pages/default.aspx.

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Brief Report: Incidence of Interstitial Cystitis and Painful Bladder Syndrome, Active Component, U.S. Armed Forces, 2000-2009

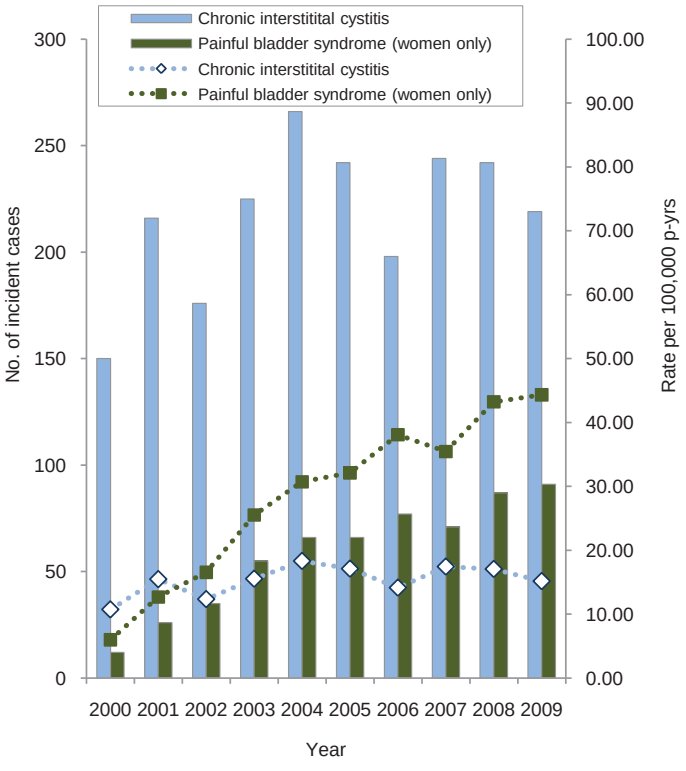
Interstitial cystitis (IC) is a chronic condition that is characterized by frequency and urgency of urination, nocturia, and bladder pain. There are not specific diagnostic tests or a consensus regarding clinical criteria for diagnosing IC. Many clinicians believe that IC is the clinical manifestation of one or more underlying conditions; in turn, the descriptive term "painful bladder syndrome" (PBS) is sometimes used in addition to IC/PBS or interchangeably with IC. Some clinicians reserve the diagnosis of IC for patients with documented bladder inflammation (e.g., on biopsy).[1]

Currently, the etiology of IC/PBS is unknown, and the diagnosis is one of exclusion, i.e., persistent symptoms after other potential causes (e.g., urinary tract infection, sexually transmitted infection, bladder cancer) have been ruled out. IC/PBS can be debilitating, especially for those with severe bladder pain.[2] Treatment regimens generally focus on symptom relief and can include medication, bladder retraining or distension, and in extreme cases, surgery. IC/PBS can be difficult to manage clinically because there are no curative or universally effective symptom-relieving treatments.

The prevalence of IC/PBS in the general U.S. population is unknown; estimates of physician diagnosed IC/PBS vary widely (range: 60 to 450 per 100,000 people).[3,4,5] The major demographic correlate of risk of IC/PBS is female gender; the diagnosis is much more common among women than men. In addition, IC/PBS is relatively frequently diagnosed among those older than 30 years; however, symptoms often persist for many years before IC/PBS is diagnosed. Some studies have shown associations between IC/PBS and conditions like fibromyalgia, irritable bowel syndrome, and chronic fatigue; such findings fuel speculation that IC/PBS may be the clinical manifestation of a systemic or autoimmune disorder.[5]

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) sponsors the Urologic Disease in America Project (UDA Project) which estimates the burden of urologic disease in the United States. IC/PBS is a condition of interest to the UDA Project.[1] This report utilizes the case-defining algorithm developed by the UDA Project to estimate frequencies, rates, and trends of IC and PBS among U.S. military members during the past ten years.

Figure 1. Incident diagnoses and rates of chronic interstitial cystitis and painful bladder syndrome, active component, U.S. Armed Forces, 2000-2009



Methods:

The surveillance period was 1 January 2000 – 31 December 2009. The surveillance population included all individuals who served in the active component of the U.S. Armed Forces at any time during the surveillance period.

For surveillance purposes, an incident case of interstitial cystitis (IC) was defined by any inpatient or outpatient medical encounter with the diagnosis code ICD-9-CM: 595.1 "chronic interstitial cystitis" reported in any diagnostic position. An incident case of painful bladder syndrome (PBS) was defined as any inpatient or outpatient medical encounter with documented diagnosis codes ICD-9-CM: 788.41 "urinary frequency" and either ICD-9-CM: 625.8 "other specified symptoms associated with female genital organs" or ICD-9-CM: 625.9 "unspecified symptom associated with female genital organ". Of note, for this analysis, male military members were considered at risk of IC but not PBS.

Results:

During the ten-year surveillance period, there were 2,178 incident diagnoses of interstitial cystitis (IC) among active component members. Throughout the period, annual crude rates of IC remained relatively stable (range: 10.7 [2000] to 18.3 [2004] incident diagnoses per 100,000 person-years [p-yrs]) **(Table 1, Figure 1).**

During the period, rates of IC were consistently higher among members of the Air Force than the other Services; the peak annual incidence rate in the Air Force was 38.5 per 100,000 p-yrs in 2001 **(Table 1).**

Table 1. Incident diagnoses and rates of chronic interstitial cystitis (IC), active component, U.S. Armed Forces, 2000-2009

	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		Total	
	No.	Rate[a]	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
Total	150	10.7	216	15.5	176	12.3	225	15.5	266	18.3	242	17.1	198	14.1	244	17.4	242	17.1	219	15.2	2178	15.3
Service																						
Army	29	6.1	43	9.1	37	7.7	56	11.4	75	15.2	74	15.2	66	13.4	99	19.4	95	17.9	93	17.0	667	13.4
Navy	30	8.2	32	8.7	27	7.2	46	12.2	40	10.8	41	11.4	35	10.1	38	11.4	46	14.0	29	8.9	364	10.3
Air Force	82	23.3	134	38.5	103	28.6	102	27.8	131	35.1	105	29.7	76	22.1	88	26.4	70	21.6	71	21.7	962	27.6
Marine Corps	8	4.7	6	3.5	6	3.5	17	9.6	10	5.7	13	7.3	14	7.9	10	5.5	21	10.8	19	9.4	124	6.9
Coast Guard	1	2.9	1	2.9	3	8.2	4	10.4	10	25.6	9	22.8	7	17.6	9	22.3	10	24.2	7	16.6	61	15.8
Sex																						
Male	37	3.1	54	4.5	33	2.7	59	4.8	46	3.7	59	4.9	41	3.4	65	5.4	65	5.3	63	5.1	522	4.3
Female	113	56.3	162	79.1	143	67.7	166	77.1	220	102.5	183	89.2	157	77.8	179	89.6	177	88.1	156	76.2	1656	80.4
Age																						
<20	15	12.0	26	20.6	8	6.5	16	13.9	20	17.9	10	10.2	8	8.4	4	4.1	8	8.0	11	11.5	126	11.6
20-24	61	13.9	75	16.6	59	12.4	69	13.9	79	15.8	65	13.5	57	12.0	69	14.7	62	13.1	60	12.5	656	13.8
25-29	29	10.4	45	16.7	40	14.5	49	17.0	60	20.0	53	17.4	48	15.5	57	18.1	68	20.8	47	13.7	496	16.5
30-34	16	7.5	13	6.3	23	11.1	24	11.6	38	18.3	35	17.2	30	15.1	26	13.1	42	20.9	29	13.9	276	13.4
35-39	20	9.7	29	14.6	14	7.2	28	14.9	32	17.7	37	21.3	28	16.3	38	22.0	20	11.6	30	17.5	276	15.1
40+	9	6.6	28	19.7	32	21.4	39	25.7	37	24.0	42	27.4	27	18.0	50	34.0	42	28.7	42	28.3	348	23.5

[a]Rate per 100,000 person-years

Three-fourths (n=1,656; 76%) of all diagnoses of IC were among females; however, from year to year, IC diagnosis rates were 15 to 28 times higher among females than males. Peak annual rates of IC were 102.5 and 5.4 per 100,000 p-yrs among females (2004) and males (2007), respectively **(Table 1).**

During the period, there were one-fourth as many incident diagnoses of painful bladder syndrome (PBS) (n=586) as IC. Rates of PBS were relatively low but substantially increased during the period **(Figure 1);** also, rates were generally higher among women in the Air Force than the other Services **(data not shown).**

Editorial comment:

Since 2003, many female military members have deployed one or more times in support of combat operations in Afghanistan and Iraq. Women who have recently returned from such deployments have relatively high rates of some genitourinary (GU) illnesses. This analysis reviewed the experience of U.S. military members during the past decade regarding a chronic, potentially debilitating, and often costly GU condition: chronic interstitial cystitis/ painful bladder syndrome.

As in general populations, diagnoses of IC are much more common among females than males in military service. Of note, however, since 2001, rates of interstitial cystitis have remained relatively low and fairly stable among women in active military service.

An unexpected finding of this report was higher rates of IC and PBS diagnoses among members of the Air Force than the other Services. The finding may reflect differences in ascertainment due, at least in part, to differences in provider knowledge, case management (e.g., urology specialty versus primary care), clinical judgment, and/or propensity to make IC/PBS diagnoses in Air Force compared to other military medical treatment facilities.

Of interest, PBS diagnoses were relatively uncommon but consistently increased during the period. The finding likely reflects the relative rarity of the condition among women in active military service. In addition, however, the finding may reflect poor sensitivity of the surveillance case definition used to identify cases, i.e., the case definition used here required the reporting of ICD-9-CM codes of at least two indicator diagnoses during single medical encounters. Also, some women with symptoms of PBS may not seek treatment for the condition or may discontinue treatment before a diagnosis of PBS is made.

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Update: Deployment Health Assessments, U.S. Armed Forces, October 2010

Since January 2003, peaks and troughs in the numbers of pre- and post-deployment health assessment forms transmitted to the Armed Forces Health Surveillance Center generally corresponded to times of departure and return of large numbers of deployers. Between April 2006 and March 2010, the number of post-deployment reassessment (PDHRA) forms per month ranged from 17,000 to 36,000 **(Table 1, Figure 1).**

During the past 12 months, the proportions of returned deployers who rated their health as "fair" or "poor" were 8-11% on post-deployment health assessment questionnaires and 10-14% on PDHRA questionnaires **(Figure 2).**

In general, on post-deployment assessments and reassessments, deployers in the Army and in reserve components were more likely than their respective counterparts to report health and exposure-related concerns **(Table 2, Figure 3).** Both active and reserve component members were more likely to report exposure concerns three to six months after, compared to the time of return from deployment **(Figure 3).**

At the time of return from deployment, soldiers serving in the active component were the most likely of all deployers to receive mental health referrals; however, three to six months after returning, active component soldiers were less likely than Army Reservists to receive mental health referrals **(Table 2).**

Finally, during the past three years, reserve component members have been more likely than active component service members to report "exposure concerns" on postdeployment assessments and reassessments **(Figure 3).**

Table 1. Deployment-related health assessment forms, by month, U.S. Armed Forces, October 2009-September 2010

	Pre-deployment assessment DD2795		Post-deployment assessment DD2796		Post-deployment reassessment DD2900	
	No.	%	No.	%	No.	%
Total	**420,444**	**100**	**430,320**	**100**	**312,301**	**100**
2009						
October	36,484	8.7	32,474	7.5	24,117	7.7
November	32,341	7.7	32,930	7.7	20,723	6.6
December	31,061	7.4	36,566	8.5	29,108	9.3
2010						
January	55,660	13.2	34,240	8.0	25,780	8.3
February	31,431	7.5	27,759	6.5	27,029	8.7
March	32,561	7.7	44,724	10.4	35,767	11.5
April	32,184	7.7	33,533	7.8	24,824	7.9
May	38,329	9.1	35,420	8.2	22,701	7.3
June	30,442	7.2	45,324	10.5	24,450	7.8
July	30,345	7.2	46,706	10.9	22,342	7.2
August	37,929	9.0	36,677	8.5	30,456	9.8
September	31,677	7.5	23,967	5.6	25,004	8.0

Figure 2. Proportion of deployment health assessment forms with self-assessed health status as "fair" or "poor", U.S. Armed Forces, October 2009-September 2010

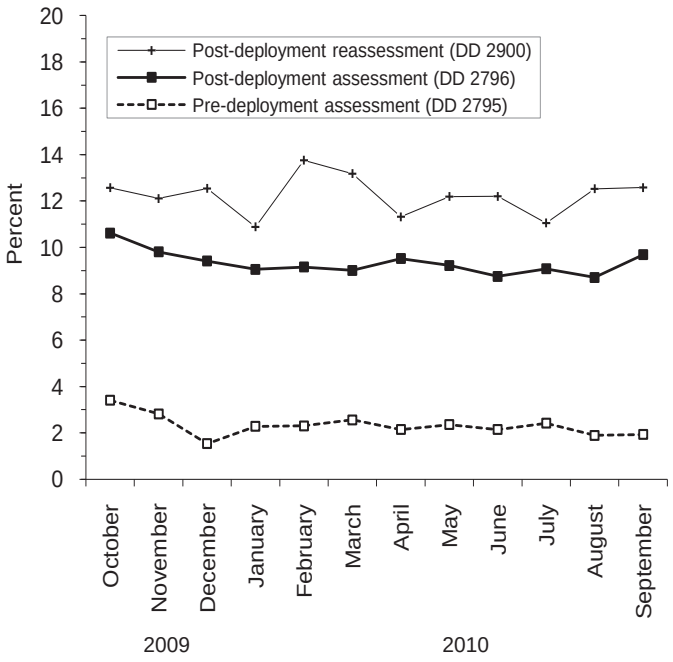


Figure 1. Total deployment health assessment and reassessment forms, by month, U.S. Armed Forces, January 2003-August 2010

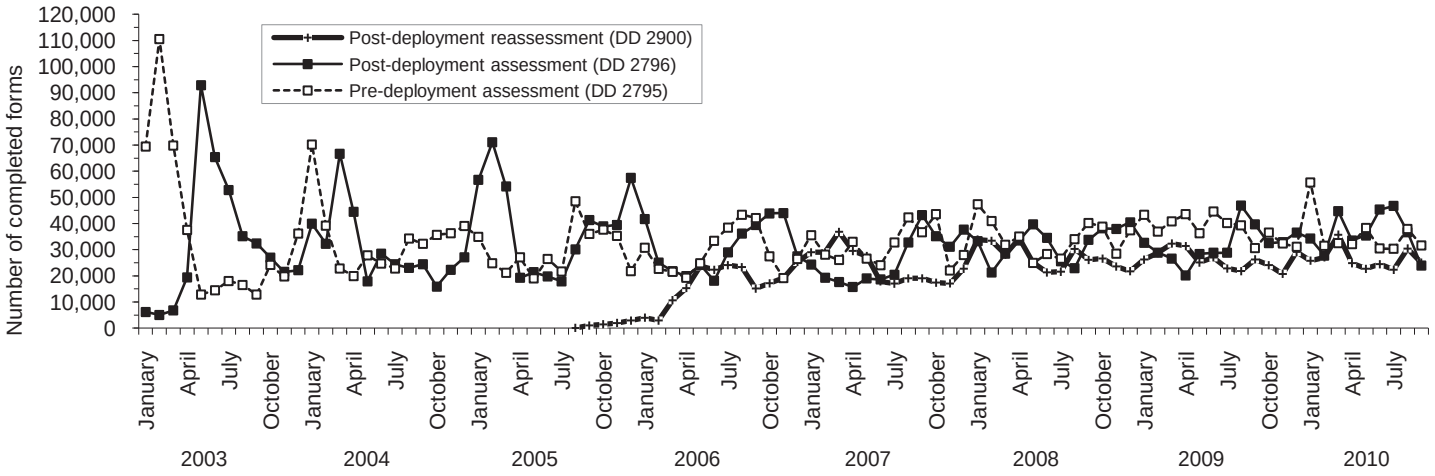


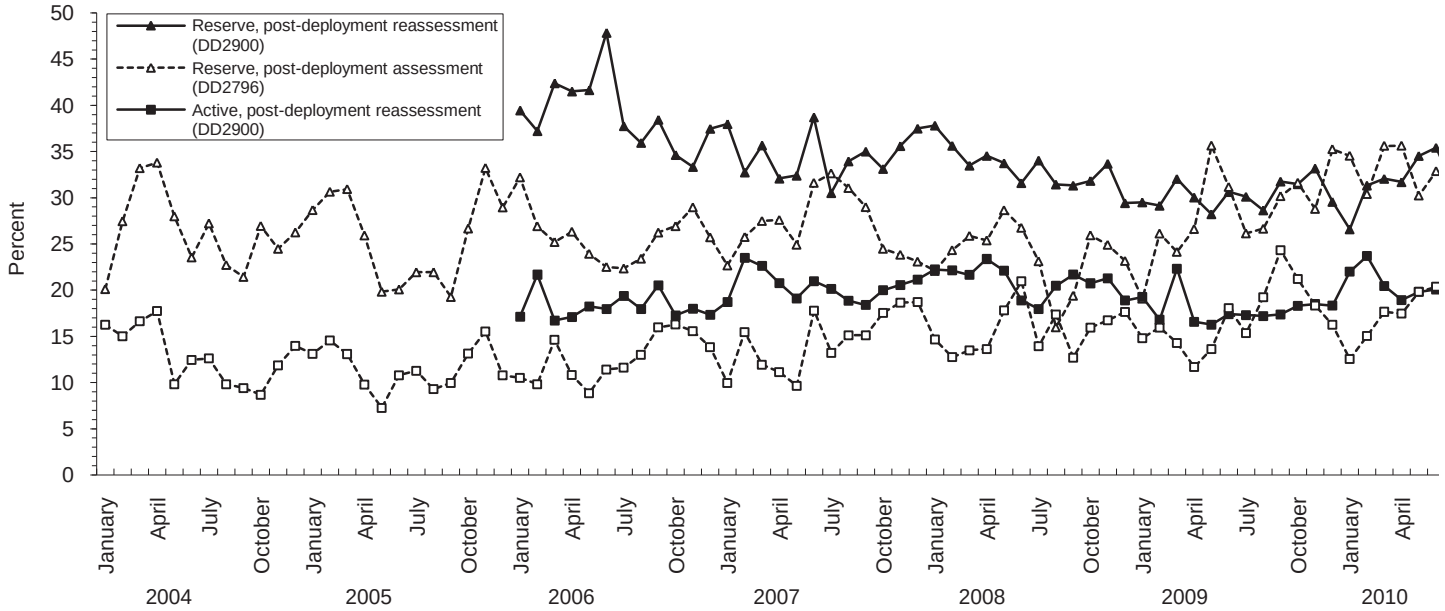
Table 2. Percentage of service members who endorsed selected questions/received referrals on health assessment forms, U.S. Armed Forces, October 2009-September 2010

	Army			Navy			Air Force			Marine Corps			All service members		
Active component	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900
	n= 152,398	n= 145,764	n= 117,614	n= 18,243	n= 15,569	n= 13,194	n= 59,654	n= 53,792	n= 50,632	n= 33,410	n= 28,726	n= 30,006	n= 263,705	n= 243,851	n= 211,446
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
General health "fair" or "poor"	3.8	10.0	14.9	1.2	4.6	5.7	0.4	3.3	4.2	1.5	7.7	9.8	2.6	7.9	11.1
Health concerns, not wound or injury	15.4	26.3	26.2	3.2	11.7	14.5	1.3	5.4	10.7	2.5	11.6	17.5	9.7	19.0	20.5
Health worse now than before deployed	na	21.7	25.5	na	11.5	13.3	na	8.1	8.4	na	16.5	18.9	na	17.5	19.7
Exposure concerns	na	21.2	21.7	na	19.0	20.8	na	10.7	14.6	na	15.6	22.2	na	18.1	20.0
PTSD symptoms (2 or more)	na	8.8	11.8	na	5.7	7.7	na	2.5	2.7	na	7.1	9.3	na	7.0	9.0
Depression symptoms (any)	na	30.7	33.1	na	22.2	24.1	na	13.1	13.7	na	26.3	30.1	na	25.8	27.5
Referral indicated by provider (any)	5.0	35.0	27.9	4.0	22.1	17.6	2.0	11.9	7.1	2.6	21.0	29.1	3.9	27.4	22.4
Mental health referral indicated[a]	1.3	7.2	14.4	0.5	3.0	5.6	0.5	1.5	2.1	0.2	2.0	5.4	0.9	5.1	9.6
Medical visit following referral[b]	97.4	99.7	98.2	88.2	89.5	95.1	85.1	96.2	97.7	49.9	83.0	94.7	89.6	96.8	97.4

	Army			Navy			Air Force			Marine Corps			All service members		
Reserve component	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900	Pre-deploy DD2795	Post-deploy DD2796	Reassess DD2900
	n= 69,911	n= 75,711	n= 69,457	n= 5,396	n= 4,306	n= 5,093	n= 16,707	n= 15,191	n= 15,304	n= 1,972	n= 3,965	n= 6,821	n= 93,986	n= 99,173	n= 96,675
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%
General health "fair" or "poor"	1.2	11.8	16.7	0.5	10.4	10.6	0.3	5.2	5.0	0.8	7.6	10.6	1.0	10.5	14.1
Health concerns, not wound or injury	18.1	34.7	42.8	1.3	32.3	32.3	0.6	9.4	15.0	1.6	23.1	35.9	13.6	30.2	37.4
Health worse now than before deployed	na	26.3	31.7	na	20.8	20.7	na	13.1	10.8	na	21.6	25.9	na	23.9	27.4
Exposure concerns	na	34.0	34.1	na	44.1	36.1	na	19.1	22.0	na	14.6	31.8	na	31.4	32.1
PTSD symptoms (2 or more)	na	8.9	18.3	na	6.6	12.8	na	2.9	2.9	na	4.5	13.7	na	7.7	15.3
Depression symptoms (any)	na	30.7	34.3	na	26.3	25.2	na	15.2	13.6	na	29.6	27.4	na	28.1	30.0
Referral indicated by provider (any)	3.7	36.7	37.0	3.6	30.0	24.0	0.5	15.8	8.2	2.7	30.5	33.2	3.1	32.9	31.5
Mental health referral indicated[a]	0.4	4.8	13.5	0.2	2.9	7.1	0.0	1.0	1.3	0.2	2.1	10.9	0.3	4.1	11.1
Medical visit following referral[b]	90.4	99.2	38.9	97.0	96.7	44.9	59.5	71.1	47.6	53.1	87.8	33.3	89.2	96.7	39.0

[a]Includes behavioral health, combat stress and substance abuse referrals.
[b]Record of inpatient or outpatient visit within 6 months after referral.

Figure 3. Proportion of service members who endorsed exposure concerns on post-deployment health assessments, U.S. Armed Forces, January 2004-August 2010



Sentinel reportable events among service members and beneficiaries at U.S. Army medical facilities, cumulative numbers[a] for calendar years through 30 September 2009 and 30 September 2010

Army

Reporting locations	Number of reports all events[b]		Food-borne						Vaccine preventable					
			Campylo-bacter		Salmonella		Shigella		Hepatitis A		Hepatitis B		Varicella[c]	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
NORTHERN														
Aberdeen Proving Ground, MD	34	35	.	.	.	.	.	.	1	.	.	.	.	.
Fort Belvoir, VA	201	196	9	10	3	7	.	6	.	.	.	.	.	.
Fort Bragg, NC	1,388	1,034	6	20	17	9	.	2	.	.	2	.	.	.
Fort Dix, NJ	0	0	.	.	.	.	.	.	.	.	.	.	.	.
Fort Drum, NY	48	89	.	.	.	.	.	.	.	.	.	.	.	.
Fort Eustis, VA	192	176	.	.	3	2	.	.	.	.	.	.	.	.
Fort George G Meade, MD	38	13	1	.	1	.	.	.	.	.	.	.	.	.
Fort Knox, KY	158	270	.	1	.	2	.	2	.	.	.	.	.	1
Fort Lee, VA	466	454	.	.	.	.	.	.	.	.	.	.	.	.
Fort Monmouth, NJ	41	36	.	.	.	1	.	.	.	1	2	1	.	.
Walter Reed AMC, DC	143	138	1	2	.	3	.	.	.	.	1	.	1	.
West Point Military Reservation, NY	90	56	1	.	.	2	.	.	.	.	1	.	.	.
SOUTHERN														
Fort Benning, GA	272	188	1	.	.	.	1	1	1	.	.	1	.	.
Fort Campbell, KY	333	500	.	1	.	7	.	3	.	.	.	.	1	.
Fort Gordon, GA	546	595	1	3	13	22	3	5	.	.	2	.	1	.
Fort Hood, TX	1,585	1,681	8	6	17	11	12	39	.	.	2	1	.	.
Fort Jackson, SC	495	425	.	.	.	.	.	.	.	.	2	.	.	.
Fort Polk, LA	483	333	.	.	1	2	3	3	.	.	.	.	.	.
Fort Rucker, AL	65	83	8	1	4	8	.	.	.	.	.	1	.	.
Fort Sam Houston, TX	468	408	1	.	6	11	2	2	.	.	1	1	1	.
Fort Sill, OK	555	398	.	.	.	.	4	1	.	.	.	.	.	.
Fort Stewart, GA	913	533	.	1	27	25	14	5	.	.	.	2	.	2
WESTERN														
Fort Bliss, TX	253	614	.	4	1	3	1	2	1	.	5	4	.	.
Fort Carson, CO	574	549	5	5	3	3	.	2	1	.	.	.	.	.
Fort Huachuca, AZ	65	79	.	.	.	2	.	.	.	.	.	.	.	.
Fort Leavenworth, KS	51	33	.	.	1	1	.	.	.	.	.	.	.	.
Fort Leonard Wood, MO	294	287	2	1	.	3	.	.	1	.	.	.	1	.
Fort Lewis, WA	876	712	3	8	7	2	1	2	.	1	.	.	.	.
Fort Riley, KS	281	337	1	2	3	1	.	2	.	.	.	.	.	.
Fort Wainwright, AK	158	263	.	2	.	.	.	.	.	.	.	.	.	.
NTC and Fort Irwin, CA	101	103	.	.	1	.	1	.	.	.	.	.	.	.
PACIFIC														
Hawaii	638	670	30	33	14	23	4	5	.	1	3	.	.	1
Japan	3	6	.	.	.	.	.	.	.	.	.	.	.	.
Korea	358	365	.	2	.	.	.	.	.	.	.	.	.	.
EUROPEAN														
Heidelberg	154	148	9	15	5	11	.	2	1	.	.	.	.	.
Landstuhl	519	355	3	2	2	2	.	4	.	.	1	2	1	.
Bavaria	344	512	5	4	5	7	.	.	.	.	.	.	.	.
CENTCOM LOCATIONS														
CENTCOM	161	185	.	.	.	2	1	.	.	.	.	.	.	.
Total	**13,344**	**12,859**	**95**	**123**	**134**	**172**	**47**	**88**	**6**	**3**	**22**	**13**	**6**	**4**

[a]Events reported by Oct 8, 2009 and 2010
[b]Sixty-seven medical events/conditions specified by Tri-Service Reportable Events Guidelines and Case Definitions, June 2009.
[c]Service member cases only.
Note: Completeness and timeliness of reporting vary by facility.

Sentinel reportable events among service members and beneficiaries at U.S. Army medical facilities, cumulative numbers[a] for calendar years through 30 September 2009 and 30 September 2010

Army

Reporting location	Arthropod-borne				Sexually transmitted						Environmental				Travel associated			
	Lyme disease		Malaria		Chlamydia		Gonorrhea		Syphilis		Cold[c]		Heat[c]		Q Fever		Tuberculosis	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
NORTHERN																		
Aberdeen Proving Ground, MD	.	.	.	.	27	29	4	6	2	.	.	.	.	.	.	.	.	.
Fort Belvoir, VA	.	.	.	.	172	152	17	21	.	.	.	.	.	.	.	.	.	.
Fort Bragg, NC	.	.	.	4	1,056	779	203	142	3	1	1	8	100	69	.	.	.	.
Fort Dix, NJ	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fort Drum, NY	.	2	.	.	45	76	3	10	.	.	.	.	.	.	.	1	.	.
Fort Eustis, VA	.	1	.	.	162	150	27	17	.	2	.	.	.	4	.	.	.	.
Fort George G Meade, MD	1	.	.	.	35	8	.	5	.	.	.	.	.	.	.	.	.	.
Fort Knox, KY	1	.	.	1	135	239	22	17	.	.	.	.	.	6	.	.	.	1
Fort Lee, VA	1	1	.	.	419	410	44	42	2	.	.	.	.	1	.	.	.	.
Fort Monmouth, NJ	11	15	.	.	25	16	2	.	1	2	.	.	.	.	.	.	.	.
Walter Reed AMC, DC	10	9	.	1	101	99	17	18	11	4	.	.	.	1	.	.	1	1
West Point Military Reservation, NY	26	13	.	.	59	32	3	5	.	.	.	.	.	4	.	.	.	.
SOUTHERN																		
Fort Benning, GA	.	1	5	.	208	112	52	22	2	.	.	.	1	51	.	.	1	.
Fort Campbell, KY	5	.	.	.	221	439	60	41	1	.	.	.	45	9	.	.	.	.
Fort Gordon, GA	.	.	.	.	445	472	73	86	.	.	.	.	8	7	.	.	.	.
Fort Hood, TX	.	.	.	1	1,233	1,342	284	265	9	8	.	.	19	7	.	.	1	1
Fort Jackson, SC	.	1	.	.	252	202	42	30	2	1	.	8	197	183	.	.	.	.
Fort Polk, LA	.	.	.	1	303	242	44	38	1	1	.	.	131	46	.	.	.	.
Fort Rucker, AL	.	2	.	.	49	62	4	5	.	.	.	.	.	4	.	.	.	.
Fort Sam Houston, TX	.	.	.	1	357	335	72	48	11	10	.	.	16	.	.	.	1	.
Fort Sill, OK	.	.	.	1	488	297	41	47	.	1	.	.	22	51	.	.	.	.
Fort Stewart, GA	.	2	1	.	680	411	103	57	5	.	.	.	76	28	6	.	1	.
WESTERN																		
Fort Bliss, TX	.	.	.	3	206	510	33	76	5	5	.	.	.	6	.	.	1	1
Fort Carson, CO	.	.	.	2	513	500	52	37	.	.	.	.	.	.	.	.	.	.
Fort Huachuca, AZ	.	1	.	.	60	67	3	2	1	1	.	.	1	6	.	.	.	.
Fort Leavenworth, KS	4	1	.	.	41	28	3	2	1	1	.	.	1	.	.	.	.	.
Fort Leonard Wood, MO	.	.	.	.	254	242	27	33	.	.	1	.	7	7	.	.	1	1
Fort Lewis, WA	.	.	.	.	789	650	72	44	2	1	.	.	1	3	.	.	1	1
Fort Riley, KS	.	1	1	.	234	299	38	28	1	.	1	.	2	4	.	.	.	.
Fort Wainwright, AK	.	.	.	5	141	235	13	12	.	.	1	9	1	.	1	.	1	.
NTC and Fort Irwin, CA	.	.	.	.	88	93	5	7	2	1	.	.	4	2	.	.	.	.
PACIFIC																		
Hawaii	.	.	1	.	519	529	53	70	5	2	.	.	3	3	1	.	5	3
Japan	.	.	.	.	3	5	.	1	.	.	.	.	.	.	.	.	.	.
Korea	.	.	.	4	338	309	13	34	2	2	1	8	4	6	.	.	.	.
EUROPEAN																		
Heidelberg	10	7	.	.	111	96	17	16	.	1	.	.	.	.	.	.	1	.
Landstuhl	21	10	1	8	395	244	58	51	8	3	.	.	27	28	.	.	2	1
Bavaria	11	8	4	2	290	412	27	78	.	1	1	.	1	.	.	.	.	.
CENTCOM LOCATIONS																		
CENTCOM	.	.	.	3	150	157	8	18	1	4	.	.	.	.	1	1	.	.
Total	**101**	**75**	**13**	**37**	**10,604**	**10,280**	**1,539**	**1,431**	**78**	**52**	**6**	**33**	**667**	**536**	**9**	**2**	**17**	**10**

Sentinel reportable events among service members and beneficiaries at U.S. Navy medical facilities, cumulative numbers[a] for calendar years through 30 September 2009 and 30 September 2010

Navy

Reporting locations	Number of reports all events[b]		Food-borne						Vaccine preventable					
			Campylo-bacter		Salmonella		Shigella		Hepatitis A		Hepatitis B		Varicella[c]	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
NATIONAL CAPITOL AREA														
NNMC Bethesda, MD	140	142	3	3	2	1	.	3	3	1	5	14	.	.
NHC Annapolis, MD	2	28	.	.	.	.	.	.	.	.	.	.	.	.
NHC Patuxent River, MD	27	14	.	.	.	2	.	.	.	.	.	.	.	.
NHC Quantico, VA	92	88	1	.	1	.	3	.	.	.	.	1	.	.
NAVY MEDICINE EAST														
NH Beaufort, SC	333	66	.	.	.	.	.	.	1	.	2	.	.	.
NH Camp Lejeune, NC	471	463	1	.	11	11	1	1	.	.	.	1	.	.
NH Charleston, SC	3	0	.	.	.	.	.	.	.	.	.	.	.	.
NH Cherry Point, NC	3	0	.	.	.	.	.	.	.	.	.	.	.	.
NH Corpus Christi, TX	2	10	.	.	.	.	.	.	.	.	.	.	.	.
NHC Great Lakes, IL	326	461	.	.	.	.	.	.	1	.	12	4	.	1
NH Guantanamo Bay, Cuba	0	0	.	.	.	.	.	.	.	.	.	.	.	.
NH Jacksonville, FL	210	179	.	3	15	16	1	.	.	.	.	7	.	.
NH Naples, Italy	1	0	.	.	.	.	.	.	.	.	.	.	.	.
NHC New England, RI	0	0	.	.	.	.	.	.	.	.	.	.	.	.
NH Pensacola, FL	188	107	1	1	7	2	2	.	.	.	.	.	.	.
NMC Portsmouth, VA	144	324	.	.	.	6	.	.	.	.	1	4	.	1
NH Rota, Spain	0	0	.	.	.	.	.	.	.	.	.	.	.	.
NH Sigonella, Italy	1	2	.	.	.	.	.	.	.	.	.	.	1	.
NAVY MEDICINE WEST														
NH Bremerton, WA	5	3	.	.	.	.	.	.	.	.	.	1	.	.
NH Camp Pendleton, CA	6	1	.	.	.	.	.	.	.	.	.	.	.	.
NH Guam-Agana, Guam	31	84	.	.	3	1	.	.	.	.	.	.	.	.
NHC Hawaii, HI	18	452	.	5	.	3	.	.	.	.	.	.	.	.
NH Lemoore, CA	47	2	.	.	.	.	.	.	.	.	.	.	.	.
NH Oak Harbor, WA	84	63	3	1	2	.	.	.	.	.	3	1	1	.
NH Okinawa, Japan	39	184	.	.	.	3	.	.	.	.	.	1	.	.
NMC San Diego, CA	674	962	6	9	11	12	1	2	.	.	49	22	1	.
NH Twentynine Palms, CA	1	3	.	.	.	.	.	.	.	.	.	.	.	.
NH Yokosuka, Japan	31	58	.	.	.	.	.	.	.	.	3	1	.	.
NAVAL SHIPS														
COMNAVAIRLANT/CINCLANTFLEET	22	19	.	.	.	.	.	.	.	.	.	.	.	.
COMNAVSURFPAC/CINCPACFLEET	67	35	.	.	.	.	.	.	.	.	.	.	.	.
OTHER LOCATIONS														
Other	2,992	2,751	13	13	19	12	5	2	1	.	10	17	2	5
Total	**5,960**	**6,501**	**28**	**35**	**71**	**69**	**13**	**8**	**6**	**1**	**85**	**74**	**5**	**7**

[a]Events reported by Oct 8, 2010
[b]Sixty-seven medical events/conditions specified by Tri-Service Reportable Events Guidelines and Case Definitions, June 2009.
[c]Service member cases only.
Note: Completeness and timeliness of reporting vary by facility.

Sentinel reportable events among service members and beneficiaries at U.S. Navy medical facilities, cumulative numbers[a] for calendar years through 30 September 2009 and 30 September 2010

Navy

Reporting location	Arthropod-borne				Sexually transmitted						Environmental				Travel associated			
	Lyme disease		Malaria		Chlamydia		Gonorrhea		Syphilis		Cold[c]		Heat[c]		Q Fever		Tuberculosis	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
NATIONAL CAPITOL AREA																		
NNMC Bethesda, MD	9	25	.	2	109	61	8	8	1	22	.	.	.	.	.	1	.	1
NHC Annapolis, MD	.	2	.	.	2	25	.	.	.	1	.	.	.	.	.	.	.	.
NHC Patuxent River, MD	6	2	.	.	18	8	2	2	1	.	.	.	.	.	.	.	.	.
NHC Quantico, VA	1	1	.	.	67	48	9	4	.	.	.	6	10	28	.	.	.	.
NAVY MEDICINE EAST																		
NH Beaufort, SC	.	.	.	.	315	60	14	6	1	.	.	.	.	.	.	.	.	.
NH Camp Lejeune, NC	2	7	1	3	317	336	75	44	.	.	1	2	61	56	1	2	.	.
NH Charleston, SC	.	.	.	.	2	.	1	.	.	.	.	.	.	.	.	.	.	.
NH Cherry Point, NC	.	.	.	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.
NH Corpus Christi, TX	.	2	.	.	2	7	.	1	.	.	.	.	.	.	.	.	.	.
NHC Great Lakes, IL	1	2	.	.	288	410	20	37	.	3	.	.	3	2	.	1	1	1
NH Guantanamo Bay, Cuba	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
NH Jacksonville, FL	.	2	1	.	175	136	18	10	.	1	.	.	.	3	.	.	.	1
NH Naples, Italy	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
NHC New England, RI	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
NH Pensacola, FL	.	1	.	.	141	93	19	8	1	2	.	.	14	.	2	.	1	.
NMC Portsmouth, VA	.	10	2	4	115	240	22	44	2	10	.	.	.	2	.	.	2	3
NH Rota, Spain	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
NH Sigonella, Italy	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.
NAVY MEDICINE WEST																		
NH Bremerton, WA	.	.	.	.	5	2	.	.	.	.	.	.	.	.	.	.	.	.
NH Camp Pendleton, CA	.	.	.	.	6	1	.	.	.	.	.	.	.	.	.	.	.	.
NH Guam-Agana, Guam	.	.	.	.	24	71	3	11	.	1	.	.	.	.	.	.	1	.
NHC Hawaii, HI	.	.	.	.	17	403	1	40	.	1	.	.	.	.	.	.	.	.
NH Lemoore, CA	.	.	.	.	42	.	5	2	.	.	.	.	.	.	.	.	.	.
NH Oak Harbor, WA	1	.	.	1	73	55	1	3	.	1	.	1	.	.	.	.	.	.
NH Okinawa, Japan	.	.	.	1	39	148	.	16	.	.	.	.	.	13	.	1	.	1
NMC San Diego, CA	1	2	3	1	483	788	76	78	17	25	.	.	20	23	2	.	4	.
NH Twentynine Palms, CA	.	.	.	.	.	2	.	1	1	.	.	.	.	.	.	.	.	.
NH Yokosuka, Japan	1	.	.	.	27	54	.	2	.	1	.	.	.	.	.	.	.	.
NAVAL SHIPS																		
COMNAVAIRLANT/CINCLANTFLEET	.	.	1	.	21	17	.	2	.	.	.	.	.	.	.	.	.	.
COMNAVSURFPAC/CINCPACFLEET	.	.	.	.	59	31	7	4	1	.	.	.	.	.	.	.	.	.
OTHER LOCATIONS																		
Other	27	41	7	18	2,443	2,118	298	230	9	14	9	8	144	268	.	.	5	5
Total	**49**	**97**	**15**	**30**	**4,794**	**5,116**	**579**	**553**	**34**	**82**	**10**	**17**	**252**	**395**	**5**	**5**	**14**	**12**

Sentinel reportable events among service members and beneficiaries at U.S. Air Force medical facilities,[a] cumulative numbers for calendar years through 30 September 2009 and 30 September 2010[b]

Air Force

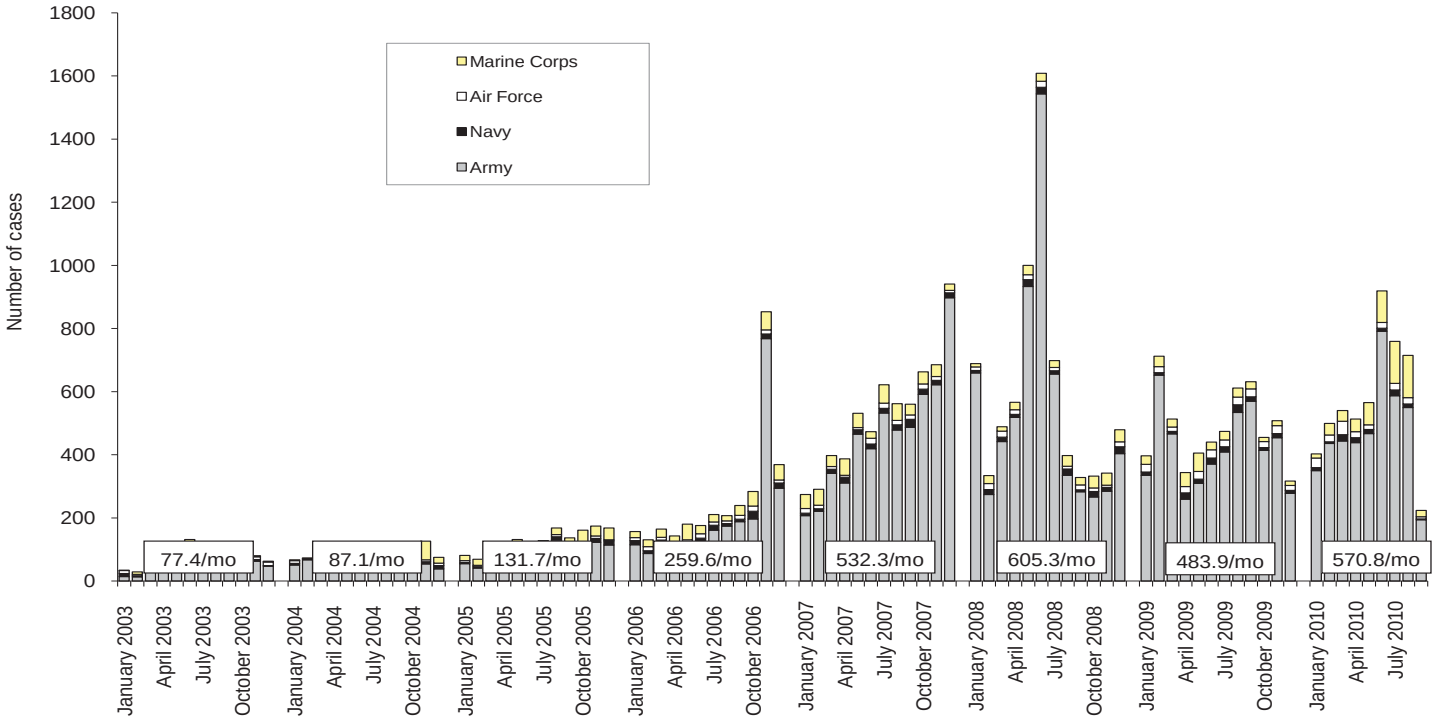
Reporting locations	Number of reports all events[c]		Food-borne						Vaccine preventable					
			Campylo-bacter		Salmonella		Shigella		Hepatitis A		Hepatitis B		Varicella[d]	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Air Combat Cmd	1,168	1,271	5	2	15	16	2	3	2	1	5	14	3	2
Air Education & Training Cmd	1,263	1,141	4	12	21	17	6	5	3	3	8	19	.	2
Air Force Dist. of Washington	159	155	.	4	2	.	.	1	.	.	3	2	.	.
Air Force Materiel Cmd	459	468	2	5	10	15	.	1	1	.	8	1	.	.
Air Force Special Ops Cmd	147	151	1	1	6	15	.	1	.	.	.	1	.	.
Air Force Space Cmd	278	265	2	.	7	7	.	.	1	1	2	1	.	.
Air Mobility Cmd	668	524	4	4	7	6	5	.	1	3	7	7	1	.
Pacific Air Forces	449	684	2	1	6	7	.	2	.	.	5	4	2	1
U.S. Air Forces in Europe	488	427	4	4	5	9	.	.	.	.	4	1	1	6
U.S. Air Force Academy	51	59	1	.	2	1	.	.	.	.	.	2	.	.
Other	79	55	1	1	3	5	.	2	.	.	.	.	.	.
Total	**5,209**	**5,200**	**26**	**34**	**84**	**98**	**13**	**15**	**8**	**8**	**42**	**52**	**7**	**11**

Reporting location	Arthropod-borne				Sexually transmitted						Environmental				Travel associated			
	Lyme disease		Malaria		Chlamydia		Gonorrhea		Syphilis		Cold[d]		Heat[d]		Q Fever		Tuberculosis	
	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010
Air Combat Cmd	10	10	.	.	1,023	1,091	89	107	4	6	5	4	5	14	.	.	.	1
Air Education & Training Cmd	7	.	3	2	1,075	967	118	108	5	4	3	.	9	1	.	.	1	1
Air Force Dist. of Washington	8	6	.	.	136	118	10	20	.	.	.	.	.	4	.	.	.	.
Air Force Materiel Cmd	11	5	.	1	387	389	35	42	3	2	.	.	2	7	.	.	.	.
Air Force Special Ops Cmd	1	.	.	1	128	124	9	4	1	1	1	1	.	.	.	1	.	1
Air Force Space Cmd	1	1	.	2	251	238	12	13	.	.	.	1	1	1	.	.	1	.
Air Mobility Cmd	22	16	1	2	549	438	53	40	2	3	14	2	1	3	.	.	1	.
Pacific Air Forces	1	.	1	1	369	610	43	49	4	1	10	.	6	6	.	.	.	2
U.S. Air Forces in Europe	17	20	1	2	413	347	38	36	2	.	1	.	.	1	.	.	2	1
U.S. Air Force Academy	1	2	1	1	44	52	2	1	.	.	.	.	.	.	.	.	.	.
Other	.	1	5	1	40	36	7	3	.	1	1	1	20	2	1	2	1	.
Total	**79**	**61**	**12**	**13**	**4,415**	**4,410**	**416**	**423**	**21**	**18**	**35**	**9**	**44**	**39**	**1**	**3**	**6**	**6**

[a]AFRESS data interruption occured in August/September of 2010 during scheduled relocation of USAFSAM servers.
[b]Events reported by Oct 8, 2010
[c]Sixty-seven medical events/conditions specified by Tri-Service Reportable Events Guidelines and Case Definitions, June 2009.
[d]Service member cases only.
Note: Completeness and timeliness of reporting vary by facility.

Deployment-related conditions of special surveillance interest, U.S. Armed Forces, by month and service, January 2003 - September 2010 (data as of 28 October 2010)

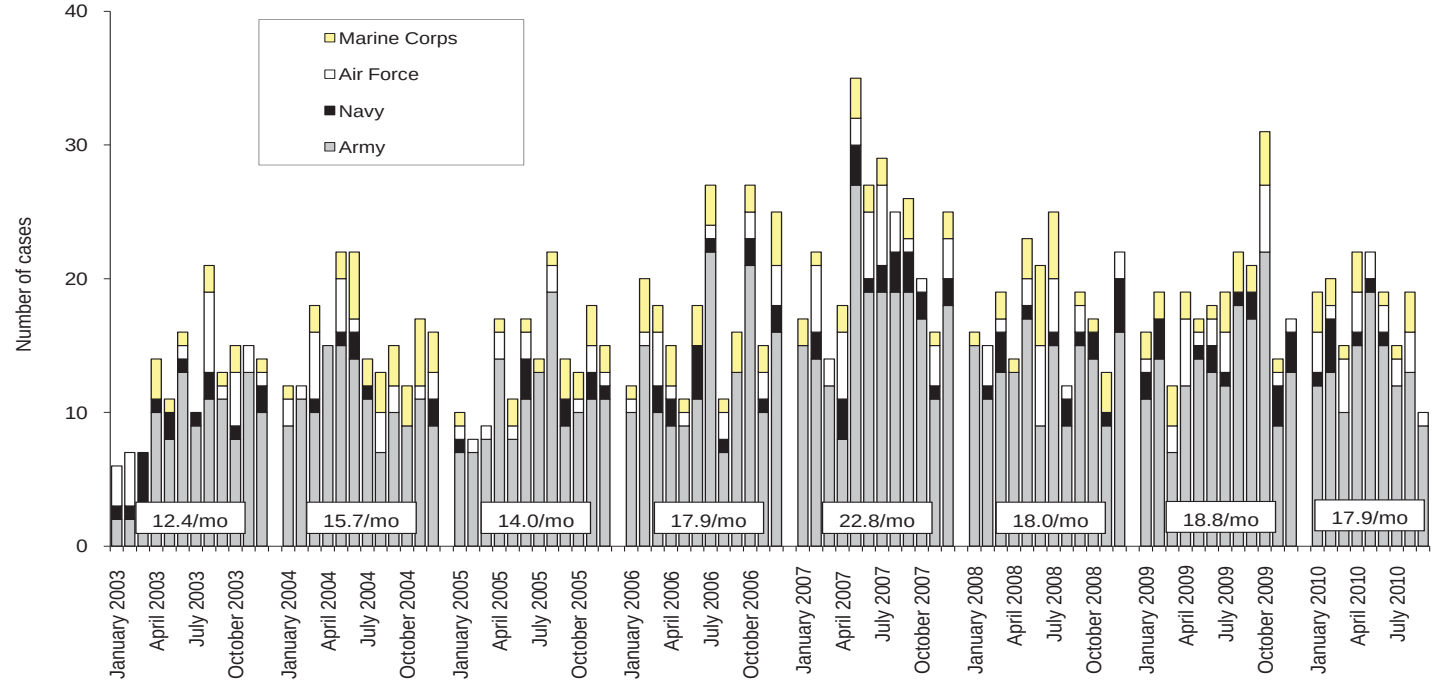
Traumatic brain injury (ICD-9: 310.2, 800-801, 803-804, 850-854, 907.0, 950.1-950.3, 959.01, V15.5_1-9, V15.5_A-F, V15.59_1-9, V15.59_A-F)[a]



Reference: Armed Forces Health Surveillance Center. Deriving case counts from medical encounter data: considerations when interpreting health surveillance reports. *MSMR*. Dec 2009; 16(12):2-8.

[a]Indicator diagnosis (one per individual) during a hospitalization or ambulatory visit while deployed to/within 30 days of returning from OEF/OIF. (Includes in-theater medical encounters from the Theater Medical Data Store [TMDS] and excludes 2,491 deployers who had at least one TBI-related medical encounter any time prior to OEF/OIF).

Deep vein thrombophlebitis/pulmonary embolus (ICD-9: 415.1, 451.1, 451.81, 451.83, 451.89, 453.2, 453.40 - 453.42 and 453.8)[b]

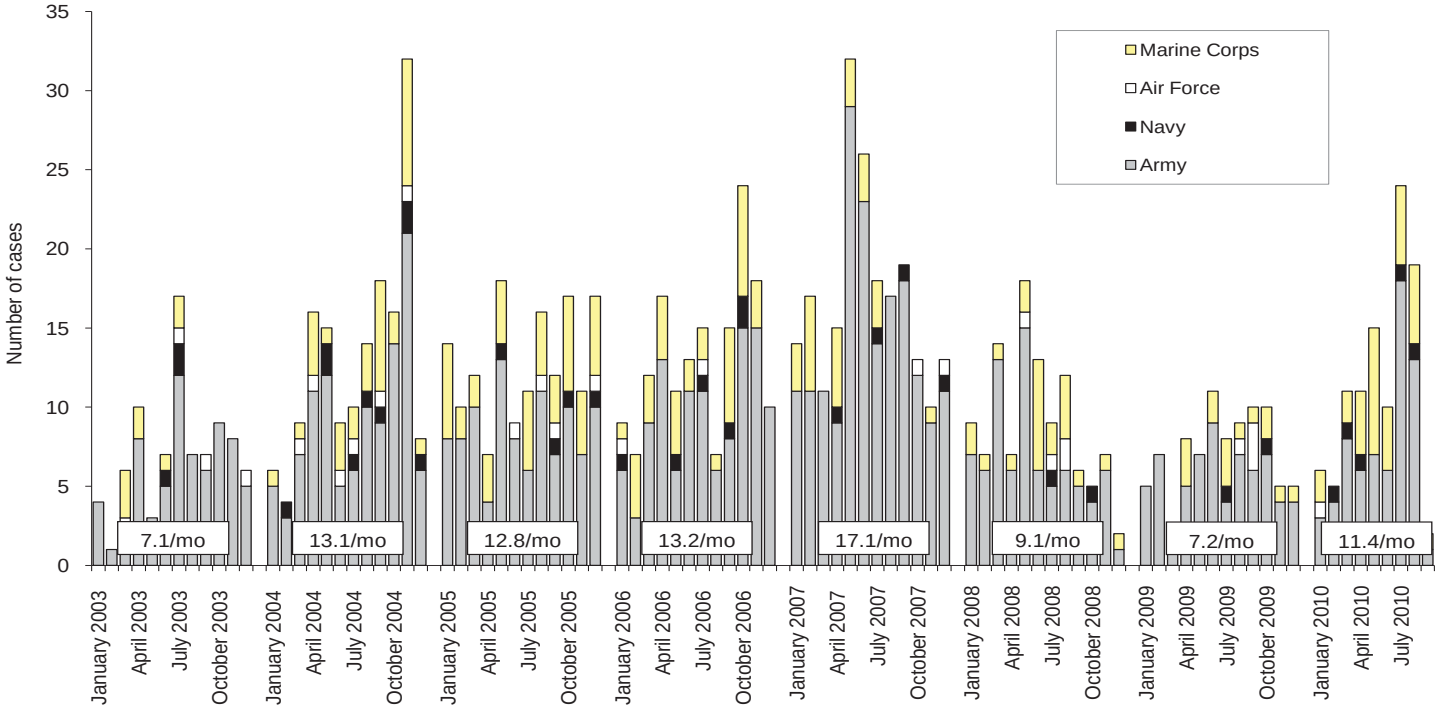


Reference: Isenbarger DW, Atwood JE, Scott PT, et al. Venous thromboembolism among United States soldiers deployed to Southwest Asia. *Thromb Res*. 2006;117(4):379-83.

[b]One diagnosis during a hospitalization or two or more ambulatory visits at least 7 days apart (one case per individual) while deployed to/within 90 days of returning from OEF/OIF.

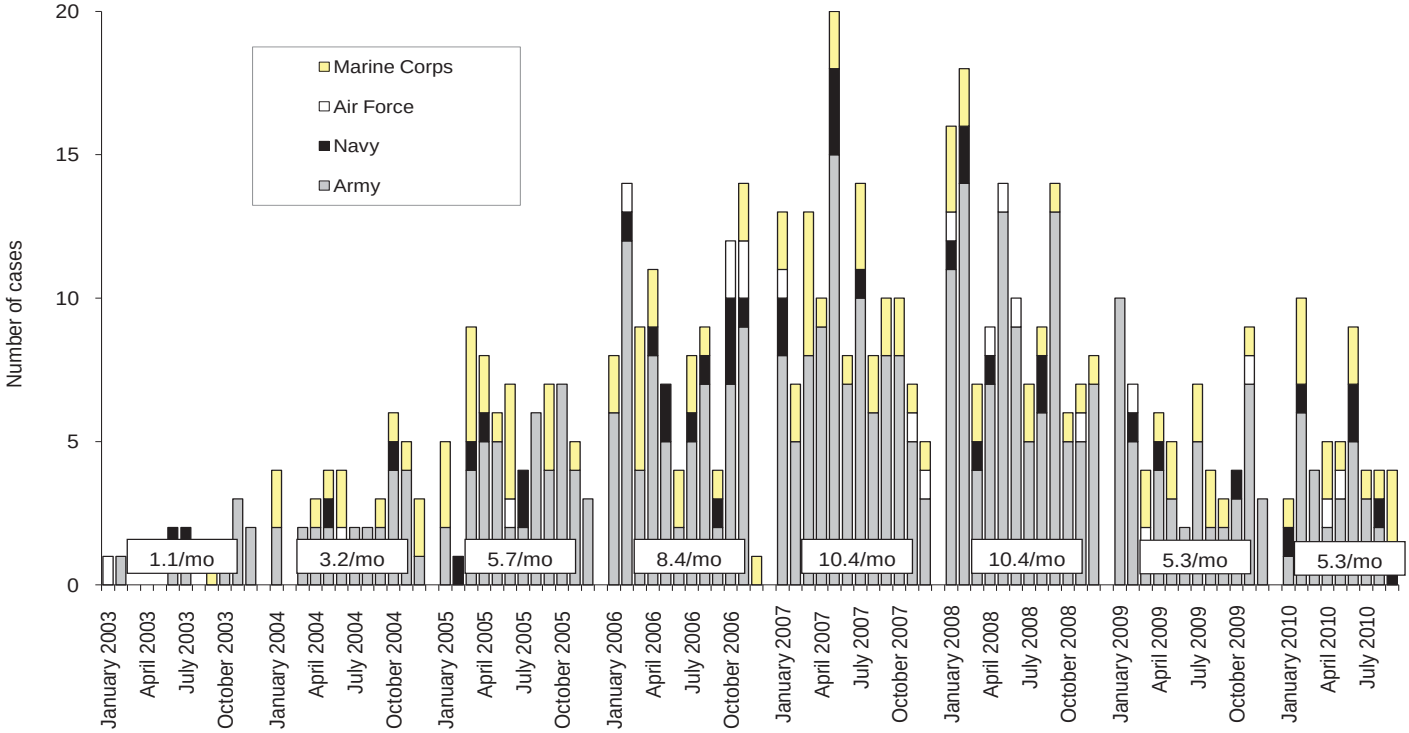
Deployment-related conditions of special surveillance interest, U.S. Armed Forces, by month and service, January 2003 - September 2010 (data as of 28 October 2010)

Amputations (ICD-9: 887, 896, 897, V49.6 except V49.61-V49.62, V49.7 except V49.71-V49.72, PR 84.0-PR 84.1, except PR 84.01-PR 84.02 and PR 84.11)[a]



Reference: Army Medical Surveillance Activity. Deployment-related condition of special surveillance interest: amputations. Amputations of lower and upper extremities, U.S. Armed Forces, 1990-2004. *MSMR*. Jan 2005;11(1):2-6.
[a]Indicator diagnosis (one per individual) during a hospitalization while deployed to/within 365 days of returning from OEF/OIF.

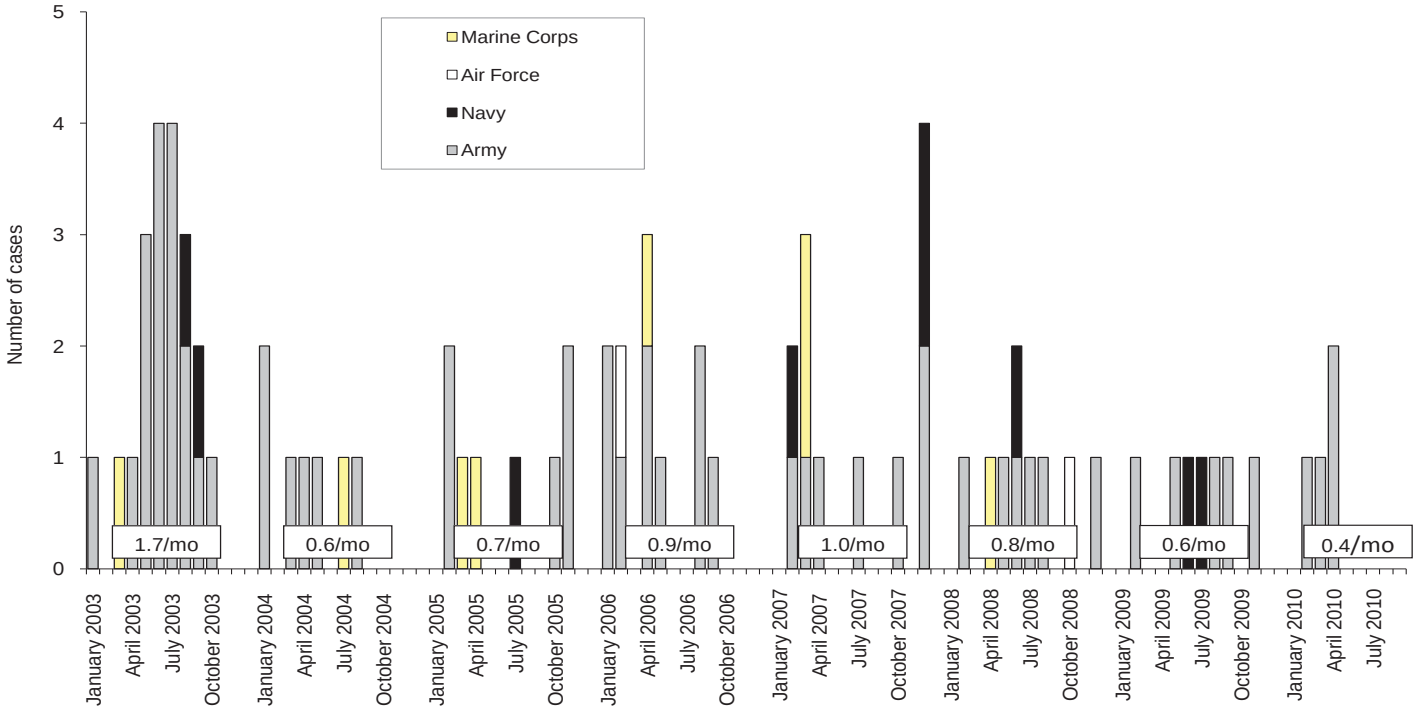
Heterotopic ossification (ICD-9: 728.12, 728.13, 728.19)[b]



Reference: Army Medical Surveillance Activity. Heterotopic ossification, active components, U.S. Armed Forces, 2002-2007. *MSMR*. Aug 2007; 14(5):7-9.
[b]One diagnosis during a hospitalization or two or more ambulatory visits at least 7 days apart (one case per individual) while deployed to/within 365 days of returning from OEF/OIF.

Deployment-related conditions of special surveillance interest, U.S. Armed Forces, by month and service, January 2003 - September 2010 (data as of 28 October 2010)

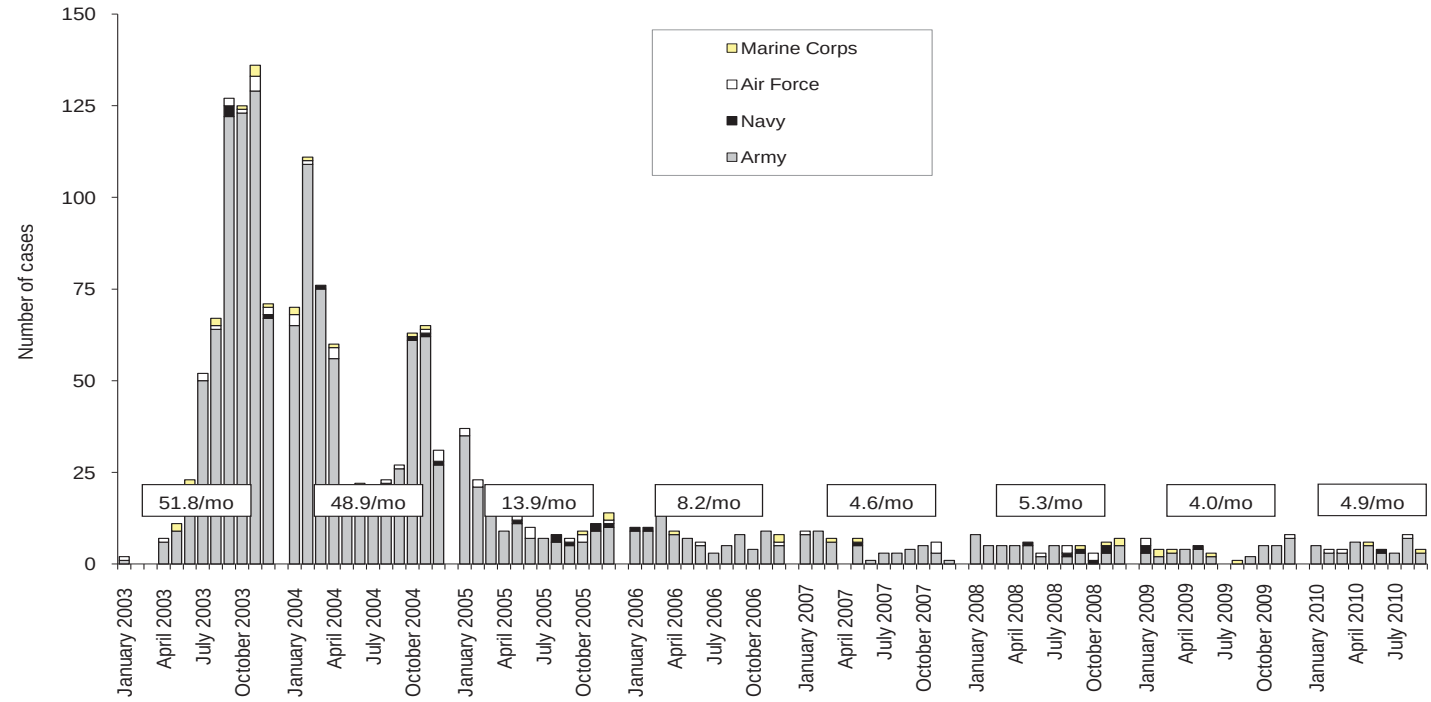
Severe acute pneumonia (ICD-9: 518.81, 518.82, 480-487, 786.09)[a]



Reference: Army Medical Surveillance Activity. Deployment-related condition of special surveillance interest: severe acute pneumonia. Hospitalizations for acute respiratory failure (ARF)/acute respiratory distress syndrome (ARDS) among participants in Operation Enduring Freedom/Operation Iraqi Freedom, active components, U.S. Armed Forces, January 2003-November 2004. *MSMR*. Nov/Dec 2004;10(6):6-7.

[a]Indicator diagnosis (one per individual) during a hospitalization while deployed to/within 30 days of returning from OEF/OIF.

Leishmaniasis (ICD-9: 085.0 to 085.9)[b]



Reference: Army Medical Surveillance Activity. Deployment-related condition of special surveillance interest: leishmaniasis. Leishmaniasis among U.S. Armed Forces, January 2003-November 2004. *MSMR*. Nov/Dec 2004;10(6):2-4.

[b]Indicator diagnosis (one per individual) during a hospitalization, ambulatory visit, and/or from a notifiable medical event during/after service in OEF/OIF.

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